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ABSTRACT

This report presents the results of the 2002 assessment in writing from the National Assessment of Educational Progress for the nation and for the participating states and jurisdictions. Comparisons are made to performance in the national assessment of 1998 at grades 4, 8, and 12. Comparison data are given within and across participating states and jurisdictions for 2002 at grade 4 and for both 1998 and 2002 at grade 8. Student performance is reported in terms of average scale scores on the NAEP writing scale and by the percentages of students who attained the achievement levels set by the National Assessment Governing Board (NAGB). In addition, the report presents percentile distributions and demographic subgroup results for the nation, including results by gender, race/ethnicity, student eligibility for free/reduced-price school lunch, Title I, parents' highest level of education, type of school, and type of school location. For participating states and jurisdictions, performance results for subgroups defined by gender, race/ethnicity, and student eligibility for free/reduced-price school lunch are presented. The report also includes sample assessment writing tasks and examples of student responses in narrative, informative, and persuasive writing modes. Scoring guides for each of the writing modes at grades 4, 8, and 12 as well as rationales for scores of student responses are provided. Appendices include information on national and state samples, school and student participation rates, participation and accommodation of students with disabilities and/or limited-English-proficient students, subgroup percentages, and state-level contextual variables. (RS)

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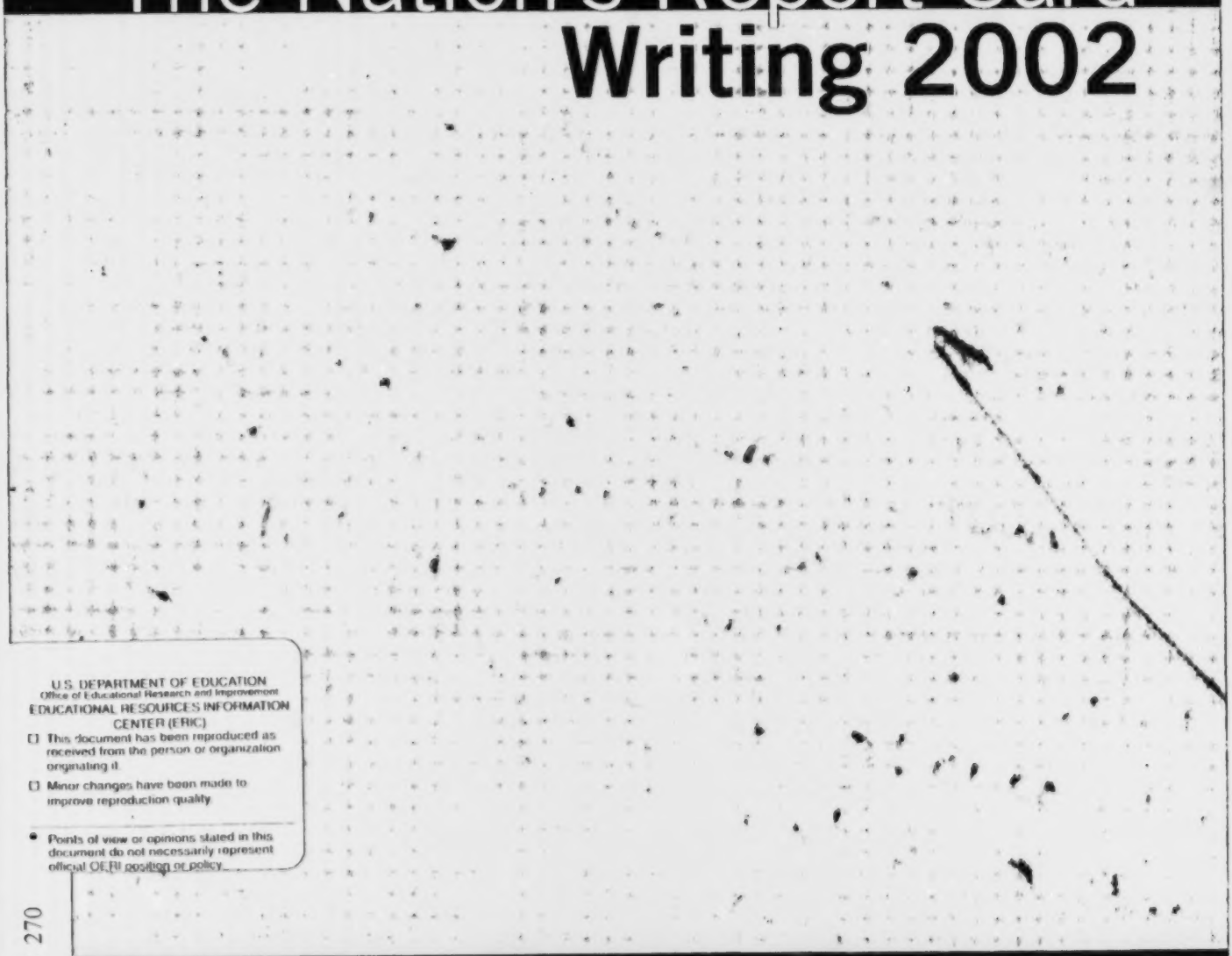

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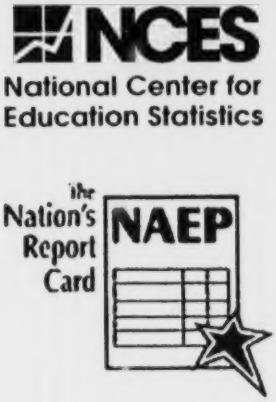

The Nation's Report Card

Writing 2002

U.S. Department of Education
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Table of Contents

Executive Summary . . . . . **xi**

Chapter 1
Introduction **1**

Overview of the 2002 National Assessment of Educational Progress in Writing 2
Framework for the 1998 and 2002 Writing Assessments 2
The 2002 NAEP Writing Assessment Instrument 5
School and Student Samples 6
Evaluating Students' Writing on the NAEP Assessment 6
Reporting the Writing Assessment Results 7
The Setting of Achievement Levels 7
Writing Achievement Level Descriptions for Each Grade 9
Trial Status of Achievement Levels 12
Interpreting NAEP Results 14
Overview of the Remaining Report 15

Chapter 2
Average Writing Scale Score and
Achievement Level Results for the Nation and States **17**

Overview 17
National Writing Scale Score Results 17
National Writing Scale Scores by Percentile 18
National Writing Achievement Level Results 19
Writing Results for States and Other Jurisdictions 21
Writing Scale Score Results by State/Jurisdiction 22
Cross-State/Jurisdiction Writing Scale Score Comparisons 26
Writing Achievement Level Results by State/Jurisdiction 30
Cross-State/Jurisdiction Writing Achievement Level Comparisons 36

Chapter 3
Subgroup Results for the Nation and States **39**

Performance of Selected Subgroups for the Nation 40
- Gender 40
- Race/Ethnicity 44
- Student Eligibility for Free/Reduced-Price School Lunch 50
- Title I 54
- Parents' Highest Level of Education 55
- Type of School 57
- Type of School Location 61

Performance of Selected Subgroups by State 62
- Gender 62
- Race/Ethnicity 68
- Student Eligibility for Free/Reduced-Price School Lunch 74

Chapter 4
Sample Assessment Tasks and Student Responses **81**

Narrative, Informative, and Persuasive Writing 82
- Narrative Writing: Weaving a Story 82
- Informative Writing: Describing and Explaining 83
- Persuasive Writing: Convincing the Reader 84

Evaluating Student Responses 85
- Grade 4 Narrative Scoring Guide 86
- Grade 4 Informative Scoring Guide 87
- Grade 4 Persuasive Scoring Guide 88
- Grade 8 Narrative Scoring Guide 89
- Grade 8 Informative Scoring Guide 90
- Grade 8 Persuasive Scoring Guide 91
- Grade 12 Narrative Scoring Guide 92
- Grade 12 Informative Scoring Guide 93
- Grade 12 Persuasive Scoring Guide 94

Grade 4 Sample Narrative Task and Student Responses
Unusual Day 95
Grade 4 Sample Informative Task and Student Responses
Lunchtime 101
Grade 4 Sample Persuasive Task and Student Responses
Library Book 107

Grade 8 Sample Narrative Task and Student Responses
President for a Day 112
Grade 8 Sample Informative Task and Student Responses
Save a Book 121
Grade 8 Sample Persuasive Task and Student Responses
School Schedule 129

Grade 12 Sample Narrative Task and Student Responses
Tall Tale 137
Grade 12 Sample Informative Task and Student Responses
Save a Book 145
Grade 12 Sample Persuasive Task and Student Responses
Heroes 153

Maps of Selected Tasks on the NAEP Writing Scale—Grades 4, 8, and 12 162

Appendix A
Overview of Procedures Used for the NAEP 2002 Writing Assessment **167**

Appendix B
Subgroup Percentages **207**

Appendix C
State-Level Contextual Variables **221**

Acknowledgments **225**

Chapter 1: Tables and Figures

Figure 1.1
Descriptions of the three purposes for writing in the NAEP writing assessment 3

Table 1.1
Distribution of writing tasks, by purpose for writing, in the NAEP 2002 writing assessment, grades 4, 8, and 12 4

Figure 1.2
Policy definitions of the three NAEP achievement levels 8

Figure 1.3
Descriptions of NAEP writing achievement levels, grade 4 9

Figure 1.4
Descriptions of NAEP writing achievement levels, grade 8 10

Figure 1.5
Descriptions of NAEP writing achievement levels, grade 12 11

Chapter 2: Tables and Figures

Figure 2.1
Average writing scale scores, grades 4, 8, and 12: 1998 and 2002 18

Figure 2.2
Writing scale score percentiles, grades 4, 8, and 12: 1998 and 2002 19

Figure 2.3
Percentage of students at or above *Basic* and *Proficient* in writing, grades 4, 8, and 12: 1998 and 2002 20

Table 2.1
Percentage of students, by writing achievement level, grades 4, 8, and 12: 1998 and 2002 21

Table 2.2
Average writing scale scores, grade 4 public schools: By state, 2002 23

Table 2.3
Average writing scale scores, grade 8 public schools: By state, 1998 and 2002 24

Figure 2.4
Comparison of state and national public school average writing scale scores, grade 4: 2002 25

Figure 2.5
Comparison of state and national public school average writing scale scores, grade 8: 2002 26

Figure 2.6
Cross-state comparison of average writing scale scores, grade 4 public schools: 2002 28

Figure 2.7
Cross-state comparison of average writing scale scores, grade 8 public schools: 2002 29

Figure 2.8
Percentage of students within each writing achievement level range, grade 4 public schools: By state, 2002 31

Figure 2.9
Percentage of students within each writing achievement level range, grade 8 public schools: By state, 2002 32
Table 2.4
Percentage of students at or above *Proficient* in writing, grade 4 public schools: By state, 2002 34
Table 2.5
Percentage of students at or above *Proficient* in writing, grade 8 public schools: By state, 1998 and 2002 35
Figure 2.10
Cross-state comparison of percentage of students at or above *Proficient* in writing, grade 4 public schools: 2002 37
Figure 2.11
Cross-state comparison of percentage of students at or above *Proficient* in writing, grade 8 public schools: 2002 38

Chapter 3: Tables and Figures

Figure 3.1
Average writing scale scores, by gender, grades 4, 8, and 12: 1998 and 2002 41
Figure 3.2
Gaps in average writing scale scores, by gender, grades 4, 8, and 12: 1998 and 2002 42
Table 3.1
Percentage of students, by writing achievement level and gender, grades 4, 8, and 12: 1998 and 2002 43
Table 3.2
Average writing scale scores, by race/ethnicity, grades 4, 8, and 12: 1998 and 2002 45
Figure 3.3
Average writing scale scores, by race/ethnicity, grades 4, 8, and 12: 1998 and 2002 46
Figure 3.4
Gaps in average writing scale scores, by race/ethnicity, grades 4, 8, and 12: 1998 and 2002 47
Table 3.3
Percentage of students, by writing achievement level and race/ethnicity, grades 4, 8, and 12: 1998 and 2002 49
Table 3.4
Average writing scale scores, by student eligibility for free/reduced-price school lunch, grades 4, 8, and 12: 1998 and 2002 50
Figure 3.5
Average writing scale scores, by student eligibility for free/reduced-price school lunch, grades 4, 8, and 12: 1998 and 2002 51
Table 3.5
Percentage of students, by writing achievement level and eligibility for free/reduced-price school lunch, grades 4, 8, and 12: 1998 and 2002 52

Table 3.6
Average writing scale scores, by student eligibility for free/reduced-price school lunch and race/ethnicity, grades 4, 8, and 12: 2002 53
Table 3.7
Average writing scale scores, by school participation in Title I, grades 4, 8, and 12: 2002 54
Table 3.8
Percentage of students, by writing achievement level and school participation in Title I, grades 4, 8, and 12: 2002 55
Table 3.9
Average writing scale scores, by student-reported parents' highest level of education, grades 8 and 12: 2002 56
Table 3.10
Percentage of students, by writing achievement level and student-reported parents' highest level of education, grades 8 and 12: 2002 56
Table 3.11
Average writing scale scores, by type of school, grades 4, 8, and 12: 1998 and 2002 57
Figure 3.6
Average writing scale scores, by type of school, grades 4, 8, and 12: 1998 and 2002 58
Table 3.12
Percentage of students, by writing achievement level and type of school, grades 4, 8, and 12: 1998 and 2002 59
Table 3.13
Average writing scale scores, by student-reported parents' highest level of education and type of school, grades 8 and 12: 2002 60
Table 3.14
Average writing scale scores, by type of location, grades 4, 8, and 12: 2002 61
Table 3.15
Percentage of students, by writing achievement level and type of location, grades 4, 8, and 12: 2002 62
Table 3.16
Average writing scale scores, by gender, grade 4 public schools: By state, 2002 . . . 63
Table 3.17
Average writing scale scores, by gender, grade 8 public schools: By state, 1998 and 2002 64
Table 3.18
Percentage of students at or above *Proficient* in writing, by gender, grade 4 public schools: By state, 2002 66
Table 3.19
Percentage of students at or above *Proficient* in writing, by gender, grade 8 public schools: By state, 1998 and 2002 67

Table 3.20
Average writing scale scores, by race/ethnicity, grade 4 public schools: By state, 2002 69
Table 3.21
Average writing scale scores, by race/ethnicity, grade 8 public schools: By state, 1998 and 2002 70
Table 3.22
Percentage of students at or above *Proficient* in writing, by race/ethnicity, grade 4 public schools: By state, 2002 72
Table 3.23
Percentage of students at or above *Proficient* in writing, by race/ethnicity, grade 8 public schools: By state, 1998 and 2002 73
Table 3.24
Average writing scale scores, by student eligibility for free/reduced-price school lunch, grade 4 public schools: By state, 2002 75
Table 3.25
Average writing scale scores, by student eligibility for free/reduced-price school lunch, grade 8 public schools: By state, 1998 and 2002 . . 76
Table 3.26
Percentage of students at or above *Proficient* in writing, by eligibility for free/reduced-price school lunch, grade 4 public schools: By state, 2002 78
Table 3.27
Percentage of students at or above *Proficient* in writing, by eligibility for free/reduced-price school lunch, grade 8 public schools: By state, 1998 and 2002 . . 79

Chapter 4: Tables and Figures

Table 4.1
Percentage scored "Uneven" or better for narrative writing task, by achievement level range, grade 4: 2002 96
Table 4.2
Percentage scored "Skillful" or better for narrative writing task, by achievement level range, grade 4: 2002 97
Table 4.3
Percentage scored "Excellent" for narrative writing task, by achievement level range, grade 4: 2002 99

Table 4.4
Percentage scored "Uneven" or better for informative writing task, by achievement level range, grade 4: 2002 102
Table 4.5
Percentage scored "Skillful" or better for informative writing task, by achievement level range, grade 4: 2002 103
Table 4.6
Percentage scored "Excellent" for informative writing task, by achievement level range, grade 4: 2002 105

Table 4.7
Percentage scored "Uneven" or better for persuasive writing task, by achievement level range, grade 4: 2002 108
Table 4.8
Percentage scored "Skillful" or better for persuasive writing task, by achievement level range, grade 4: 2002 109
Table 4.9
Percentage scored "Excellent" for persuasive writing task, by achievement level range, grade 4: 2002 111

Table 4.10
Percentage scored "Uneven" or better for narrative writing task, by achievement level range, grade 8: 2002 113
Table 4.11
Percentage scored "Skillful" or better for narrative writing task, by achievement level range, grade 8: 2002 114
Table 4.12
Percentage scored "Excellent" for narrative writing task, by achievement level range, grade 8: 2002 117

Table 4.13
Percentage scored "Uneven" or better for informative writing task, by achievement level range, grade 8: 2002 122
Table 4.14
Percentage scored "Skillful" or better for informative writing task, by achievement level range, grade 8: 2002 123
Table 4.15
Percentage scored "Excellent" for informative writing task, by achievement level range, grade 8: 2002 125

Table 4.16
Percentage scored "Uneven" or better for persuasive writing task, by achievement level range, grade 8: 2002 130
Table 4.17
Percentage scored "Skillful" or better for persuasive writing task, by achievement level range, grade 8: 2002 131
Table 4.18
Percentage scored "Excellent" for persuasive writing task, by achievement level range, grade 8: 2002 133

Table 4.19
Percentage scored "Uneven" or better for narrative writing task, by achievement level range, grade 12: 2002 138
Table 4.20
Percentage scored "Skillful" or better for narrative writing task, by achievement level range, grade 12: 2002 139

Table 4.21
Percentage scored "Excellent" for narrative writing task, by achievement level range, grade 12: 2002 142

Table 4.22
Percentage scored "Uneven" or better for informative writing task, by achievement level range, grade 12: 2002 146

Table 4.23
Percentage scored "Skillful" or better for informative writing task, by achievement level range, grade 12: 2002 147

Table 4.24
Percentage scored "Excellent" for informative writing task, by achievement level range, grade 12: 2002 150

Table 4.25
Percentage scored "Uneven" or better for persuasive writing task, by achievement level range, grade 12: 2002 153

Table 4.26
Percentage scored "Skillful" or better for persuasive writing task, by achievement level range, grade 12: 2002 155

Table 4.27
Percentage scored "Excellent" for persuasive writing task, by achievement level range, grade 12: 2002 158

Figure 4.1
Map of selected writing tasks on the NAEP writing scale, by purpose for writing, grade 4: 2002 163

Figure 4.2
Map of selected writing tasks on the NAEP writing scale, by purpose for writing, grade 8: 2002 164

Figure 4.3
Map of selected writing tasks on the NAEP writing scale, by purpose for writing, grade 12: 2002 165

Executive Summary

The National Assessment of Educational Progress (NAEP) is an ongoing nationally representative sample survey of student achievement in core subject areas. Authorized by Congress and administered by the National Center for Education Statistics (NCES) within the Institute of Education Sciences of the U.S. Department of Education, NAEP regularly reports to the public on the educational progress of fourth-, eighth-, and twelfth-grade students.

This report presents the results of the NAEP 2002 writing assessment for the nation at grades 4, 8, and 12 and for participating states and other jurisdictions at grades 4 and 8. Assessment results are described in terms of their average writing score on a 0–300 scale and in terms of the percentage of students attaining each of three achievement levels: *Basic, Proficient,* and *Advanced.*

The achievement levels are performance standards adopted by the National Assessment Governing Board (NAGB) as part of its statutory responsibilities. The achievement levels are a collective judgment of what students should know and be able to do for each grade tested. As provided by law, NCES, upon review of a congressionally mandated evaluation of NAEP, determined that the achievement levels are to be considered developmental and should be interpreted with caution. However, both the Commissioner and the Board believe that these performance standards are useful for understanding trends in student achievement. They have been widely used by national and state officials, as a common yardstick of academic performance.

The results presented in this report are based on representative samples of students for the nation and for participating states and other jurisdictions. Approximately 276,000 students from 11,000 schools were assessed. The national results reflect the performance of students attending both public and nonpublic schools, while the state and jurisdiction results reflect only the performance of students attending public schools. Information about writing achievement for students in selected urban school districts is presented in the NAEP 2002 Trial Urban District Assessment of writing.[1]

In addition to providing average scores and achievement level performance in writing for the nation and states and other jurisdictions, this report provides results for subgroups of students defined by various background characteristics. A summary of major findings from the NAEP 2002 assessment is presented on the following pages. Comparisons are made to national results from the 1998 assessment. The NAEP 1998 writing assessment was not administered at the state/jurisdiction level at grade 4; therefore, state-level comparisons are presented only for grade 8. Changes in student performance across years or differences between groups of students in 2002 are discussed only if they have been determined to be statistically significant at the 0.05 level.

Overall Writing Results for the Nation and the States

Writing Results for the Nation

- Students' average scores on the NAEP writing assessment increased between 1998 and 2002 at grades 4 and 8. However, no significant change was detected in the performance of twelfth-graders between the two assessment years.
- Fourth-grade writing scores at the 10th to the 90th percentiles increased between 1998 and 2002. This means that the performance of high, middle, and low performing students improved between the two years. Gains were observed among the middle- and higher-performing students at grade 8. At grade 12, only the score at the 90th percentile increased since 1998, while scores at the 10th and 25th percentiles were lower in 2002.
- In 2002, between 24 and 31 percent of the students in each of the three grades performed at or above the *Proficient* level. Fourth- and eighth-graders made overall gains since 1998 in reaching the *Proficient* level. There was no significant change detected in the percentage of twelfth-graders at or above *Proficient;* however the percentage of twelfth-graders at or above *Basic* decreased since 1998.

[1] Lutkus, A. D., Daane, M. C., Weiner, A. W., and Jin, Y. (forthcoming). *The Nation's Report Card: Trial Urban District Assessment, Writing 2002.* Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

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Writing Results for the States and Other Jurisdictions

Results from the 2002 assessment are reported for 48 states and other jurisdictions at grades 4, and 47 states and other jurisdictions at grade 8. Results are reported only for public-school students at the state or jurisdiction level.

At grade 4

- In 2002, fourth-grade average scores were higher than the national average score in 17 jurisdictions, and lower than the national average in 22 jurisdictions.
- Connecticut, Massachusetts, and Delaware were among the highest performing jurisdictions at grade 4. The average writing scores in Connecticut and Massachusetts were higher than in any of the other participating jurisdictions. Massachusetts was only outperformed by Connecticut. Students in Delaware were only outperformed by students in Connecticut and Massachusetts and had higher scores than the other participating jurisdictions except New York.

At grade 8

- Of the 36 jurisdictions that participated in both the 1998 and 2002 eighth-grade writing assessment, 16 showed score increases in 2002 and none showed a significant decrease.
- The percentage of eighth-graders at or above *Proficient* increased in 17 jurisdictions and decreased in 1 jurisdiction since 1998.
- Connecticut, Department of Defense domestic and overseas schools, Massachusetts, and Vermont were among the highest performing jurisdictions at grade 8.

National and State Writing Results for Student Subgroups

In addition to overall results for the nation and for the states and jurisdictions, NAEP reports on the performance of various subgroups of students. Observed differences between student subgroups in NAEP writing performance most likely reflect the interaction of a range of socioeconomic and educational factors not addressed in this report or by NAEP.

National Results

Gender

- The average scores of male and female fourth- and eighth-graders were higher in 2002 than in 1998; however, at grade 12, the average scores for male students declined.
- The percentages of female students performing at or above *Proficient* increased since 1998 at all three grades, and the percentage of male students performing at or above *Proficient* increased at grades 4 and 8.
- In 2002, female students had higher average scores than male students at all three grades.
- In 2002, females outperformed males on average by 17 points at grade 4, 21 points at grade 8, and 25 points at grade 12. The decline in the average score for male twelfth-graders between 1998 and 2002 resulted in an increase in the gap between male and female students.

Race/Ethnicity

- At grades 4 and 8, White, Black, and Hispanic students had higher average writing scores in 2002 than in 1998.
- The percentages of students performing at or above *Proficient* increased since 1998 among White, Black, Hispanic, and Asian/Pacific Islander students at grade 4 and among White, Black, and Hispanic students at grade 8.
- At grade 4, Asian/Pacific Islander students outperformed all other groups in 2002, and White students outperformed Black, Hispanic, and American Indian/Alaska Native students. At grade 8, White and Asian/Pacific Islander students scored higher on average than Black, Hispanic, and American Indian/Alaska Native students. At grade 12, White and Asian/Pacific Islander students scored higher on average than Black and Hispanic students, and Hispanic students had higher scores than Black students.
- In 2002, the score gap between White and Black fourth-graders was smaller than in 1998.

Eligibility for Free/Reduced-Price Lunch

The program providing free/reduced-price lunch is administered by the U.S. Department of Agriculture (USDA) for children near or below the poverty line. Eligibility is determined by the USDA's Income Eligibility Guidelines (http://www.fns.usda.gov/cnd/IEGs&NAPs/IEGs.htm).

- Average fourth- and eighth-grade writing scores in 2002 were higher than in 1998 for students who were eligible for free/reduced-price lunch, as well as for those who were not eligible.
- The percentages of fourth- and eighth-graders at or above *Proficient* were higher in 2002 than in 1998 for students who were eligible and those who were not eligible for free/reduced-price lunch.
- In 2002, the average writing score for students who were eligible for free/reduced-price lunch was lower than that of students who were not eligible at all three grades.

Title I Participation

Title I is a federally funded program that provides educational services to children who live in areas with high concentrations of low-income families. Due to recent changes in how the program is administered, comparisons to previous assessment year results are not available.

- In 2002, students at all three grades who attended schools that participated in Title I, had lower average writing scores than students who attended schools that did not participate in Title I.

Parents' Level of Education
(reported by students)

- There was a positive relationship between higher levels of parental education as reported by students and student achievement: for both eighth- and twelfth-graders, the higher the parental education level, the higher the average writing score. (Information about parental education was not collected at grade 4.)

Type of School

- The average writing scores for fourth- and eighth-grade public-school students were higher in 2002 than in 1998.
- In 2002, at all three grades, students who attended nonpublic schools had higher average writing scores than students who attended public schools. At grade 8, students who attended Catholic schools had higher scores than those attending other nonpublic schools.

Type of School Location

- Students in urban fringe schools had higher average writing scores than their peers in central city schools and rural schools at all three grades. Fourth- and eighth-grade students in rural schools had higher scores than their peers in central city schools, while the reverse was true at grade 12.

State and Jurisdiction Results

Gender

- At grade 8, average scores were higher in 2002 than in 1998 for both male and female students in 12 jurisdictions, for female students only in 1 jurisdiction, and for male students only in 2 jurisdictions.
- In 2002, females had higher average scores than males in all the participating jurisdictions at both grades 4 and 8.

Race/Ethnicity

- At grade 8, average scores increased since 1998 for White students in 15 jurisdictions, for Black students in 9 jurisdictions, for Hispanic students in 4 jurisdictions, and for students classified as Other in 1 jurisdiction.
- Score increases were observed for two or more racial/ethnic subgroups of eighth-graders in the following jurisdictions: Arkansas, Delaware, Florida, Louisiana, Maryland, Missouri, North Carolina, South Carolina, and Washington.

Free/Reduced-Price Lunch

- At grade 8, average scores increased since 1998 for both those students who were eligible for free/reduced-price lunch and those who were not eligible in 11 jurisdictions, for eligible students in 1 jurisdiction, and for students who were not eligible in 4 jurisdictions.

1 Introduction

Writing is a fundamental skill for individuals and for civilizations. Writing enables us to record and reflect on our experiences, to communicate with others, and to preserve a common culture. In our democratic society, writing is a central form of discourse. A healthy and civil society requires citizens who are able to state a case carefully and to reason with others persuasively. Thus, writing has always been an important feature of school curricula from the early elementary grades through high school and post-secondary education. In a technology-based, electronically dependent economy, the ability to write clearly is a critical skill for advancing knowledge, enhancing competence, posing new ideas, and making those ideas comprehensible to an information-dependent citizenry.[1]

The National Assessment of Educational Progress (NAEP) reports on writing assessments are an important source of information on students' writing achievement. This report presents major results from the NAEP 2002 writing assessment of the nation's fourth-, eighth-, and twelfth-grade students. In addition, it provides results for fourth- and eighth-grade students in states and other jurisdictions that participated in the 2002 assessment. Finally, the report compares students' 2002 performance to their performance in 1998. The report is intended to inform educators, policymakers, parents, and the general public about students' achievement in writing.

[1] Scardamalia, M. and Bereiter, C. (1991). Literate Expertise. In K. A. Ericsson and J. Smith (Eds.), *Toward a General Theory of Expertise: Prospects and Limits*, pp. 172–19. New York: Cambridge University Press.

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Overview of the 2002 National Assessment of Educational Progress in Writing

For more than 30 years, NAEP has regularly collected, analyzed, and reported valid and reliable information about what American students know and can do in a variety of subject areas. As authorized by the U.S. Congress, NAEP assesses representative national samples of fourth-, eighth-, and twelfth-grade students.

Since 1990, NAEP has also assessed representative samples of fourth- and eighth-grade students in states and other jurisdictions that participate in the NAEP state-by-state assessments in several subjects. NAEP is administered and overseen by the National Center for Education Statistics (NCES), in the U.S. Department of Education's Institute of Education Sciences (IES).

The content of all NAEP assessments is determined by subject-area frameworks that are developed by the National Assessment Governing Board (NAGB). The framework for the NAEP writing assessment guided development of the assessment that was first administered in 1998 and most recently in 2002.

The assessment was first given nationally to fourth-, eighth-, and twelfth-graders in 1998. State-level assessments using the same instrument as that used nationally were conducted only at grade 8 in 1998.

The 2002 assessment was conducted at grades 4, 8, and 12 nationally, and at grades 4 and 8 within the states and other jurisdictions that participated in the state-level assessment. Throughout this report, national results from the 2002 assessment are compared to those from 1998 at all three grades. Comparisons of results for states and other jurisdictions that participated in both the 1998 and 2002 assessments at grade 8 are also presented.

Framework for the 1998 and 2002 Writing Assessments

The NAEP 1998 writing framework is the blueprint that has specified the content and guided the development of the 1998 and 2002 writing assessments.[2] The framework establishes the assessment objectives and provides direction for the kinds of writing tasks to be included in the instrument. The framework is a product of a nationwide process involving many parties concerned about writing education, including teachers, state education officials, subject-area specialists, researchers, and representatives of the general public. This effort was managed by the Center for Research on Evaluation, Standards, and Student Testing (CRESST), under the direction of NAGB. NAGB also contracted with ACT to provide detailed guidelines for the kinds of writing tasks to include in the assessment.

[2] National Assessment Governing Board. *Writing Framework and Specifications for the 1998 National Assessment of Educational Progress.* Washington, DC: Author.

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The NAEP writing framework, informed by current research and theory, emphasizes that writing addresses a variety of purposes and audiences. The framework discusses three purposes for writing: **narrative** (telling a story), **informative** (informing the reader), and **persuasive** (persuading the reader). To ensure that NAEP writing assessments reflect the genres receiving the most instructional emphasis, the framework prescribes that NAEP writing tasks focus on these three purposes at all three grade levels (4, 8, and 12).[3] Descriptions of narrative, informative, and persuasive writing appear in figure 1.1.

Figure 1.1 Descriptions of the three purposes for writing in the NAEP writing assessment

Purposes for Writing	
Narrative writing	Narrative writing encourages writers to incorporate their imagination and creativity in the production of stories or personal essays. At its best, narrative writing fosters imagination, creativity, and speculation by allowing writers to express their thoughts and emotions, and offers an opportunity for writers to analyze and understand their actions and those of others. The narrative tasks included in the NAEP 2002 writing assessment asked students to write many kinds of stories (most fiction, some nonfiction). Some of the tasks asked students to write in response to photographs, drawings, cartoons, poems, or stories (provided with the assessment).
Informative writing	In informative writing, the writer provides the reader with information. Informative writing may involve reporting on events or experiences or analyzing concepts and relationships. When used as a means of exploration, informative writing helps both the writer and the reader to learn new ideas and to reexamine old conclusions. Informative tasks in the NAEP 2002 writing assessment asked students to write on specified subjects using many kinds of information, such as newspaper articles, charts, photographs, or reported dialogues (provided with the assessment), as well as their own knowledge. Students could write in a variety of formats, such as reports, newspaper articles, and letters.
Persuasive writing	Persuasive writing seeks to persuade the reader to take action or to bring about change. This type of writing involves a clear awareness of what arguments might most affect the audience being addressed. Writing persuasively also requires the use of such skills as analysis, inference, synthesis, and evaluation. Persuasive tasks in the NAEP 2002 writing assessment asked students to write letters to the editor or to friends, to refute arguments, or to take sides in a debate.

SOURCE: National Assessment Governing Board. *Writing Framework and Specifications for the 1998 National Assessment of Educational Progress.* Washington, DC: Author.

[3] On the importance of specifying purpose in writing instruction, see Oliver, E. (1989). Effects of Assignment on Writing Quality at Four Grade Levels. *English Quarterly 21*(4), 224–32.

Gentile, C. A., Martin-Rehrmann, J., and Kennedy, J. H. (1995). *Windows into the Classroom: NAEP's 1992 Portfolio Study* (NCES 95–035). Washington, DC: U.S. Dept. of Education, Office of Educational Research and Development, National Center for Education Statistics.

Applebee, A. N., Langer, J. A., Jenkins, L., Mullis, I. V. S., and Foertsch, M. (1990). *Learning to Write in Our Nation's Schools: Instruction and Achievement in 1988 at Grades 4, 8, and 12.* Princeton, NJ: Educational Testing Service.

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As the framework notes, the purposes for writing are not always completely discrete. For example, a narrative essay may make a persuasive moral or ethical point, and a letter to an editor or congressional representative may include pertinent facts and information. In fact, many of the students whose writing received high ratings used integrated forms of presentation. The professional raters who evaluated the student responses were instructed not to penalize such blended presentations.

The emphasis on each purpose for writing varies from grade to grade to match the differing levels of student development and instructional focus. The assessment emphasized narrative writing for fourth-graders, gave comparable weight to all three purposes for eighth-graders, and stressed persuasive writing for twelfth-graders. Table 1.1 shows both the percentage and actual number of tasks for each writing purpose at each grade level in the 2002 assessment. These distributions match the target percentages established by the framework.

Table 1.1 Distribution of writing tasks, by purpose for writing, in the NAEP 2002 writing assessment, grades 4, 8, and 12

	Purpose for writing	Percentage of tasks	Number of tasks
Grade 4			
	Narrative	40	8
	Informative	35	7
	Persuasive	25	5
Grade 8			
	Narrative	35	7
	Informative	35	7
	Persuasive	30	6
Grade 12			
	Narrative	25	5
	Informative	35	7
	Persuasive	40	8

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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In addition to specifying the percentage of the assessment that should be devoted to each writing purpose, the framework specifies several elements of writing that should pertain to writing tasks across the assessment. When constructing writing assessment tasks, test developers consider various aspects of writing that are important for motivating student engagement in the assessment tasks.

A writing task is usually a short text or visual stimulus, posing a situation, concern, or topic about which students are asked to write under a stated time constraint. The 2002 assessment used many tasks that specified the writer's audience. Some students were asked to write, for example, a letter to a friend or to a school board. Students also had opportunities to write in a variety of forms, such as essays, letters, reports, and stories. Writing tasks may have used any of a variety of stimuli to evoke written responses, including photographs, cartoons, drawings, newspaper articles, letters, or literary works, such as poems or stories. In addition, students received a brief brochure with suggestions for planning and revising their writing.

To meet the framework's objective that students value writing as a communicative activity, background questions on the assessment asked students about their view of themselves as writers and their writing practices at home and at school. Data for these background questions are available on the NAEP web site (http://nces.ed.gov/nationsreportcard/naepdata).

The 2002 NAEP Writing Assessment Instrument

So that the assessment reflects the NAEP writing framework and expert perspectives on the measurement of writing, it undergoes stringent review by teachers, teacher educators, state officials, and measurement specialists during the development process. All components of the assessment are evaluated for curricular relevance, developmental appropriateness, fairness, and adherence to the framework and test specifications. The 2002 writing assessment included twenty 25-minute tasks each at grades 4, 8, and 12.

To minimize the burden on any one student, NAEP uses a procedure referred to as matrix sampling, in which different students at any given grade are administered only a small portion of the entire assessment. At each grade, students received test booklets with two 25-minute tasks. A representative sample of students at each grade received each task, and the results were combined to produce average group and subgroup results based on the entire assessment. In addition to the writing tasks in each student's test booklet, students were asked to complete two sections of background questions regarding their home or school experiences related to writing achievement. In total, the time required for each student to participate in the 2002 NAEP writing assessment was no more than 1 hour.

School and Student Samples

At the national level, results are reported for both public- and nonpublic-school students. At the state or jurisdiction level, results are reported only for public-school students. In order to obtain a representative sample of students for reporting national and state or jurisdiction results, approximately 3,000 students from approximately 100 schools per state or jurisdiction were sampled. In each state that did not participate, a small number of students proportionate to the number of students in that state were sampled to contribute to the national sample. The total sampled for the 2002 writing assessment included approximately 139,200 fourth-grade students in 5,500 schools; 118,500 eighth-graders in 4,700 schools; and 18,500 twelfth-graders in 700 schools. Each selected school and student participating in the assessment represents a portion of the total population. The administration procedures for the 2002 assessment permitted testing accommodations for students with disabilities and limited English proficient students who required them in order to participate. For information on sample sizes and participation rates by state or jurisdiction, see appendix A.

Evaluating Students' Writing on the NAEP Assessment

Student responses in the NAEP 2002 writing assessment were evaluated according to scoring guide criteria describing six performance levels: Unsatisfactory, Insufficient, Uneven, Sufficient, Skillful, and Excellent. Scoring guides were developed for narrative, informative, and persuasive writing at each grade level. A scale of 1 to 6 representing these performance levels was used to evaluate each student response. The guides included specific notes for raters describing various student approaches to the task and offering anchor or prototypical student responses at each grade level. For each task, a wide spectrum of student approaches was judged acceptable. Acknowledging developmental differences between fourth-, eighth-, and twelfth-grades, the scoring guides (presented in chapter 6) reflect higher performance expectations for students in higher grades. Following the framework, the scoring guides emphasize students' abilities to develop and elaborate ideas, organize their thoughts, and write grammatically correct prose. The criteria for measuring command of written English mechanics differed by grade, but were the same across the three purposes for writing (narrative, informative, and persuasive) within each grade.

To give students an opportunity to plan their writing, NAEP provided a page for students to engage in such planning activities as rough drafts, outlines, lists, diagrams, and pictures. Students, although not required to plan their writing, were also given pamphlets with ideas about planning, editing, and revising writing and were encouraged to utilize them in the assessment. Recognizing that a time-controlled writing context constrains students' opportunities to plan and revise, responses to assessment tasks were viewed as first drafts and evaluated accordingly. (Further information about scoring is located in chapter 5.)

Reporting the Writing Assessment Results

Results from the NAEP writing assessment are presented in two ways: as scale scores and as percentages of students attaining achievement levels. The scale scores, indicating how much students *know and can do* in writing, are presented as average scale scores and as scale scores at selected percentiles. The achievement level results provide further information by indicating the degree to which student performance meets the standards set for what they *should know and be able to do.* Results are reported only for groups or subgroups of students; an individual student's performance cannot be reported based on NAEP assessment.

Student responses to all tasks were analyzed to determine the percentage of students scoring at each level on the 6-level guides for narrative, informative, and persuasive writing. The analysis entails summarizing the results on separate subscales for each writing purpose and then combining the separate scales to form a single composite writing scale. This analysis yields the overall scale of 0 to 300 for each of the grades, 4, 8, and 12. Performance for each grade is scaled separately; therefore, average scale scores cannot be compared across grades. For example, equal scores on grade 4 and grade 8 scales do not imply equal levels of writing ability. (See the section on data analysis and IRT scaling in appendix A for more information on scaling procedures.)

Achievement level results are presented in terms of writing achievement levels as authorized by NAEP legislation and adopted by NAGB. For each grade assessed, NAGB has adopted three achievement levels, *Basic, Proficient,* and *Advanced.* For reporting purposes, achievement level cut scores are placed on the writing scale to show the following ranges: below *Basic, Basic, Proficient,* and *Advanced.* The achievement level results are then reported as percentages of students within each achievement level range, as well as the percentage of students at or above *Basic* and at or above *Proficient.*

The Setting of Achievement Levels

The 1988 NAEP legislation that created the National Assessment Governing Board (NAGB) directed the Board to identify "appropriate achievement goals . . . for each subject area" that NAEP measures.[4] The 2001 NAEP reauthorization reaffirmed many of the Board's statutory responsibilities, including developing "appropriate student achievement levels for each grade or age in each subject area to be tested . . . ."[5] In order to follow this directive and achieve the mandate of the 1988 statute "to improve the form and use of NAEP results," NAGB undertook the development of student performance standards (called "achievement levels"). Since 1990, the Board has adopted achievement levels in mathematics, reading, U.S. history, geography, science, writing, and civics.

[4] National Education Statistics Act. National Assessment of Educational Progress Improvement Act, Pub. L. No. 100–297, 20 U.S.C. §1221 *et seq.* (1988).

[5] No Child Left Behind Act of 2001, Pub. L. No. 107–110, 115 Stat. 1425 (2002).

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The Board defined three achievement levels for each grade. The *Basic* level denotes partial mastery of the knowledge and skills that are fundamental for proficient work at a given grade. The *Proficient* level represents solid academic performance. Students reaching this level demonstrate competency over challenging subject matter. The *Advanced* level presumes mastery of both the *Basic* and *Proficient* levels and represents superior performance. Figure 1.2 presents the policy definitions of the achievement levels that apply across grades and subject areas. The policy definitions guided the development of the writing achievement levels, as well as the achievement levels established in all other subject areas. Adopting three levels of achievement for each grade signals the importance of looking at more than one standard of performance. In the Board's view, the overall achievement goal for American students is performance that qualifies at the *Proficient* level or higher as measured by NAEP. The *Basic* level is not the desired goal, but rather represents partial mastery that is a step toward *Proficient*.

The achievement levels in this report were adopted by the Board based on a standard-setting process designed and conducted under a contract with ACT. To develop these levels, ACT convened a cross section of educators and interested citizens from across the nation and asked them to judge what students should know and be able to do relative to a body of content reflected in the NAEP assessment framework for writing. This achievement level setting process was reviewed by an array of individuals that included policymakers, representatives of professional organizations, teachers, parents, and other members of the general public. Prior to adopting these levels of student achievement, NAGB engaged a large number of individuals to comment on the recommended levels and to review the results.

The results of the achievement level setting process, after NAGB's approval, become a set of achievement level descriptions and a set of achievement level cut scores on the 0–300 NAEP writing scale. These levels are used to describe student performance on the 1998 and 2002 writing assessments.

Figure 1.2 Policy definitions of the three NAEP achievement levels

Achievement Levels	
Basic	This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.
Proficient	This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.
Advanced	This level signifies superior performance.

SOURCE: National Assessment Governing Board. *Writing Framework and Specification for the 1998 National Assessment of Educational Progress.* Washington, DC: Author.

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Writing Achievement Level Descriptions for Each Grade

Specific definitions of the writing achievement levels for grades 4, 8, and 12 are presented in figures 1.3 through 1.5. As noted previously, the achievement levels are cumulative. Therefore, students performing at the *Proficient* level also display the competencies associated with the *Basic* level, and students at the *Advanced* level also demonstrate the competencies associated with both the *Basic* and the *Proficient* levels. For each achievement level listed in figures 1.3 through 1.5, the scale score that corresponds to the lowest cut score of that level on the NAEP writing scale is shown in parentheses. For example, in figure 1.3 the scale score of 176 corresponds to the lowest score of the grade 4 *Proficient* level of achievement in writing.

Figure 1.3 Descriptions of NAEP writing achievement levels, grade 4

Grade 4 Achievement Levels

The following statements describe the kinds of things fourth-grade students should be able to do in writing at each level of achievement. These statements should be interpreted with the constraints of the National Assessment of Educational Progress (NAEP) in mind. Student performances reported with respect to these descriptions are in response to two age-appropriate writing tasks completed within 25 minutes each. Students are not advised of the writing tasks in advance nor engaged in pre-writing instruction and preparation; however, they are given a set of "ideas for planning and reviewing" their writing for the assessment. Although the Writing NAEP cannot fully assess students' abilities to produce a polished piece of writing, the results do provide valuable information about students' abilities to generate writing in response to a variety of purposes, tasks, and audiences within a rather limited period of time.

Basic **(115)**

Fourth-grade students performing at the Basic level should be able to produce a somewhat organized and detailed response within the time allowed that shows a general grasp of the writing task they have been assigned.

Fourth-grade students performing at the *Basic* level should be able to produce a somewhat organized response within the time allowed that shows a general grasp of the writing task they have been assigned. Their writing should include some supporting details. Its grammar, spelling, and capitalization should be accurate enough to communicate to a reader, although there may be mistakes that get in the way of meaning.

Proficient **(176)**

Fourth-grade students performing at the Proficient level should be able to produce an organized response within the time allowed that shows an understanding of the writing task they have been assigned. Their writing should include details that support and develop their main idea, and it should show that these students are aware of the audience they are expected to address.

Fourth-grade students performing at the *Proficient* level should be able to produce an organized response within the time allowed that shows an understanding of the writing task they have been assigned. Their writing should include details that support and develop the main idea of the piece, and its form, content, and language should show that these students are aware of the audience they are expected to address. The grammar, spelling, and capitalization in the work should be accurate enough to communicate to a reader; there may be some mistakes, but these should not get in the way of meaning.

Advanced **(225)**

Fourth-grade students performing at the Advanced level should be able to produce an effective, well developed response within the time allowed that shows a clear understanding of the writing task they have been assigned and the audience they are expected to address. Their writing should include details and be clearly organized, should use precise and varied language, and may show signs of analytical, evaluative, or creative thinking.

Fourth-grade students performing at the *Advanced* level should be able to produce an effective, well developed response within the time allowed that shows a clear understanding of the writing task they have been assigned. Their writing should be clearly organized, making use of techniques such as consistency in topic or theme, sequencing, and a clearly marked beginning and ending. It should make use of precise and varied language to speak to the audience the students are expected to address, and it should include details and elaboration that support and develop the main idea of the piece. Their writing may also show signs of analytical, evaluative, or creative thinking. The grammar, spelling, and capitalization in the work should be accurate enough to communicate clearly; mistakes should be so few and so minor that a reader can easily skim over them.

SOURCE: National Assessment Governing Board. (2001). *National Assessment of Educational Progress Achievement Levels, 1992–1998 for Writing.* S.C. Loomis and M.L. Bourque (Eds.). Washington, DC: Author.

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Figure 1.4 Descriptions of NAEP writing achievement levels, grade 8

Grade 8 Achievement Levels

The following statements describe the kinds of things eighth-grade students should be able to do in writing at each level of achievement. These statements should be interpreted with the constraints of the National Assessment of Educational Progress (NAEP) in mind. Student performances reported with respect to these descriptions are in response to two age-appropriate writing tasks completed within 25 minutes each. Students are not advised of the writing tasks in advance nor engaged in pre-writing instruction and preparation; however, they are given a set of "ideas for planning and reviewing" their writing for the assessment. Although the Writing NAEP cannot fully assess students' abilities to produce a polished piece of writing, the results do provide valuable information about students' abilities to generate writing in response to a variety of purposes, tasks, and audiences within a rather limited period of time.

Basic **(114)**

Eighth-grade students performing at the Basic level should be able to produce an effective response within the time allowed that shows a general understanding of the writing task they have been assigned. Their writing should show that these students are aware of the audience they are expected to address, and it should include supporting details in an organized way.

Eighth-grade students performing at the *Basic* level should be able to produce an effective response within the time allowed that shows a general understanding of the writing task they have been assigned. Their writing should show that these students are aware of the audience they are expected to address, and it should include supporting details in an organized way. The grammar, spelling, punctuation, and capitalization in the work should be accurate enough to communicate to a reader, although there may be mistakes that get in the way of meaning.

Proficient **(173)**

Eighth-grade students performing at the Proficient level should be able to produce a detailed and organized response within the time allowed that shows an understanding of both the writing task they have been assigned and the audience they are expected to address. Their writing should include precise language and varied sentence structure, and it may show analytical, evaluative, or creative thinking.

Eighth-grade students performing at the *Proficient* level should be able to produce an effective response within the time allowed that shows an understanding of both the writing task they have been assigned and the audience they are expected to address. Their writing should be organized, making use of techniques such as sequencing or a clearly marked beginning and ending, and it should make use of details and some elaboration to support and develop the main idea of the piece. Their writing should include precise language and some variety in sentence structure, and it may show analytical, evaluative, or creative thinking. The grammar, spelling, punctuation, and capitalization in the work should be accurate enough to communicate to a reader; there may be some errors, but these should not get in the way of meaning.

Advanced **(224)**

Eighth-grade students performing at the Advanced level should be able to produce a fully developed response within the time allowed that shows a clear understanding of both the writing task they have been assigned and the audience they are expected to address. Their writing should show some analytical, evaluative, or creative thinking and may make use of literary strategies to clarify a point. At the same time, the writing should be clearly organized, demonstrating precise word choice and varied sentence structure.

Eighth-grade students performing at the *Advanced* level should be able to produce an effective and fully developed response within the time allowed that shows a clear understanding of both the writing task they have been assigned and the audience they are expected to address. Their writing should show some analytical, evaluative, or creative thinking, and should demonstrate precise word choice and varied sentence structure. Their work should include details and elaboration that support and develop the main idea of the piece, and it may make use of strategies such as analogies, illustrations, examples, anecdotes, or figurative language to clarify a point. At the same time, the writing should show that these students can keep their work clearly and consistently organized. Writing by eighth-grade students performing at the *Advanced* level should contain few errors in grammar, spelling, punctuation, capitalization, and sentence structure. These writers should demonstrate good control of these elements and may use them for stylistic effect in their work.

SOURCE: National Assessment Governing Board. (2001). *National Assessment of Educational Progress Achievement Levels, 1992–1998 for Writing.* S.C. Loomis and M.L. Bourque (Eds.). Washington, DC: Author.

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Figure 1.5 Descriptions of NAEP writing achievement levels, grade 12

Grade 12 Achievement Levels

The following statements describe the kinds of things twelfth-grade students should be able to do in writing at each level of achievement. These statements should be interpreted with the constraints of the National Assessment of Educational Progress (NAEP) in mind. Student performances reported with respect to these descriptions are in response to two age-appropriate writing tasks completed within 25 minutes each. Students are not advised of the writing tasks in advance nor engaged in pre-writing instruction and preparation; however, they are given a set of "ideas for planning and reviewing" their writing for the assessment. Although the Writing NAEP cannot fully assess students' abilities to produce a polished piece of writing, the results do provide valuable information about students' abilities to generate writing in response to a variety of purposes, tasks, and audiences within a rather limited period of time.

Basic **(122)**

Twelfth-grade students performing at the Basic level should be able to produce a well-organized response within the time allowed that shows an understanding of both the writing task they have been assigned and the audience they are expected to address. Their writing should show some analytical, evaluative, or creative thinking, and it should include details that support and develop the main idea of the piece.

Twelfth-grade students performing at the *Basic* level should be able to produce an effective response within the time allowed that shows an understanding of both the writing task they have been assigned and the audience they are expected to address. Their writing should show some analytical, evaluative, or creative thinking. It should include details that support and develop the central idea of the piece, and it should be clearly organized, making use of techniques such as consistency in topic or theme, sequencing, and a clear introduction and conclusion. The grammar, spelling, punctuation, and capitalization in these students' work should be accurate enough to communicate to a reader; there may be some errors, but these should not get in the way of meaning.

Proficient **(178)**

Twelfth-grade students performing at the Proficient level should be able to produce an effectively organized and fully developed response within the time allowed that uses analytical, evaluative, or creative thinking. Their writing should include details that support and develop the main idea of the piece, and it should show that these students are able to use precise language and variety in sentence structure to engage the audience they are expected to address.

Twelfth-grade students performing at the *Proficient* level should be able to produce an effective and fully developed response within the time allowed that uses analytical, evaluative, or creative thinking. Their writing should be organized effectively, and it should show that these students have a clear understanding of the writing task they have been assigned. It should be coherent, making use of techniques such as a consistent theme, sequencing, and a clear introduction and conclusion, and it should include details and elaboration that support and develop the main idea of the piece. The writing should show that these students are able to use precise language and variety in sentence structure to engage the audience they are expected to address. Writing by twelfth-grade students performing at the *Proficient* level should contain few errors in grammar, spelling, punctuation, capitalization, and sentence structure. These writers should demonstrate a command of these elements and may use them for stylistic effect in their work.

Advanced **(230)**

Twelfth-grade students performing at the Advanced level should be able to produce a mature and sophisticated response within the time allowed that uses analytical, evaluative, or creative thinking. Their writing should be detailed and fully developed, and it should show that these students are able to use literary strategies to develop their ideas. At the same time, the writing should be well crafted and coherent, and it should show that these students are able to engage the audience they are expected to address through rich and compelling language, precise word choice, and variety in sentence structure.

Twelfth-grade students performing at the *Advanced* level should be able to produce a mature and sophisticated response within the time allowed that uses analytical, evaluative, or creative thinking. Their writing should be fully developed, incorporating details and elaboration that support and extend the main idea of the piece. It should show that these students can use literary strategies—anecdotes and repetition, for example—to develop their ideas. At the same time, the writing should be well crafted, organized, and coherent, and it should incorporate techniques such as a consistency in topic or theme, sequencing, and a clear introduction and conclusion. It should show that these writers can engage the audience they are expected to address through rich and compelling language, precise word choice, and variety in sentence structure. Writing by twelfth-grade students performing at the *Advanced* level should contain few errors in grammar, spelling, punctuation, capitalization, and sentence structure. These writers should demonstrate a sophisticated command of these elements and may use them for stylistic effect in their work.

SOURCE: National Assessment Governing Board. (2001). *National Assessment of Educational Progress Achievement Levels, 1992–1998 for Writing.* S.C. Loomis and M.L. Bourque (Eds.). Washington, DC: Author.

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Trial Status of Achievement Levels

As provided by law and based upon a review of congressionally mandated evaluation of NAEP, NCES has determined that achievement levels are to be used on a trial basis and should be used with caution until NCES determines their validity. In 1993, the first of several congressionally mandated evaluations of the achievement level setting process concluded that the procedures used to set the achievement levels were flawed and that the percentage of students at or above any particular achievement level cut point may be underestimated.[6] Others have critiqued these evaluations, asserting that the weight of the empirical evidence does not support such conclusions.[7]

In response to the evaluations and critiques, NAGB conducted an additional study of the 1992 reading achievement levels before deciding to use them for reporting 1994 NAEP results.[8] When reviewing the findings of this study, the National Academy of Education (NAE) panel expressed concern about what it saw as a "confirmatory bias" in the study and about the inability of this study to "address the panel's perception that the levels had been set too high."[9] In 1997, the NAE panel summarized its concerns about interpretation of NAEP results based on the achievement levels as follows:

> First, the potential instability of the levels may interfere with the accurate portrayal of trends. Second, the perception that few American students are attaining the higher standards we have set for them may deflect attention to the wrong aspects of education reform. The public has indicated its interest in benchmarking against international standards, yet it is noteworthy that when American students performed very well on a 1991 international reading assessment, these results were discounted because they were contradicted by poor performance against the possibly flawed NAEP reading achievement levels in the following year.[10]

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[6] United States General Accounting Office. (1993). *Education Achievement Standards: NAGB's Approach Yields Misleading Interpretations.* U.S. General Accounting Office Report to Congressional Requestors. Washington, DC: Author.

National Academy of Education. (1993). *Setting Performance Standards for Achievement: A Report of the National Academy of Education Panel on the Evaluations of the NAEP Trial State Assessment: An Evaluation of the 1992 Achievement Levels.* Stanford, CA: Author.

[7] Cizek, G. (1993). *Reactions to National Academy of Education Report.* Washington, DC: National Assessment Governing Board.

Kane, M. (1993). *Comments on the NAEP Evaluation of the NAGB Achievement Levels.* Washington, DC: National Assessment Governing Board.

[8] American College Testing. (1995). *NAEP Reading Revisited: An Evaluation of the 1992 Achievement Level Descriptions.* Washington, DC: National Assessment Governing Board.

[9] National Academy of Education. (1996). Reading Achievement Levels. In *Quality and Utility: The 1994 Trial State Assessment in Reading. The Fourth Report of the National Academy of Education Panel on the Evaluation of the NAEP Trial State Assessment.* Stanford, CA: Author.

[10] National Academy of Education. (1997). *Assessment in Transition: Monitoring the Nation's Educational Progress*, p. 99. Mountain View, CA: Author.

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NCES and NAGB continue to seek new and better ways to set performance standards on NAEP.[11] For example, NCES and NAGB jointly sponsored a national conference on standard setting in large-scale assessments, which explored many issues related to standard setting.[12] Although new directions were presented and discussed, a proven alternative to the current process has not yet been identified. NCES and NAGB continue to call on the research community to assist in finding ways to improve standard setting for reporting NAEP results.

The most recent congressionally mandated evaluation, conducted by the National Academy of Sciences (NAS), relied on prior studies of achievement levels, rather than carrying out new evaluations, on the grounds that the process has not changed substantially since the initial problems were identified. Instead, the NAS panel studied the development of the 1996 science achievement levels. The NAS panel basically concurred with earlier congressionally mandated studies. The panel concluded that "NAEP's current achievement level setting procedures remain fundamentally flawed. The judgment tasks are difficult and confusing; raters' judgments of different item types are internally inconsistent; appropriate validity evidence for the cut scores is lacking; and the process has produced unreasonable results."[13]

The NAS panel accepted the continuing use of achievement levels in reporting NAEP results on a trial basis, until such time as better procedures can be developed. Specifically, the NAS panel concluded that ". . . tracking changes in the percentages of students performing at or above those cut scores (or in fact, any selected cut scores) can be of use in describing changes in student performance over time."[14]

NAGB urges all who are concerned about student performance levels to recognize that the use of these achievement levels is a developing process and is subject to various interpretations. NAGB and NCES believe that the achievement levels are useful for reporting trends in the educational achievement of students in the United States.[15] In fact, achievement level results have been used in reports by the President of the United States, the Secretary of Education, state governors, legislators, and members of Congress. Government leaders in the nation and in more than 40 states use these results in their annual reports.

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[11] Reckase, M. D. (2000). *The Evolution of the NAEP Achievement Level Setting Process. A Summary of the Research and Development of Efforts Conducted by ACT.* Iowa City, IA: ACT, Inc.

[12] National Assessment Governing Board and National Center for Education Statistics. (1995). *Proceedings of the Joint Conference on Standard Setting for Large-Scale Assessments of the National Assessment Governing Board (NAGB) and the National Center for Education Statistics (NCES).* Washington, DC: Government Printing Office.

[13] Pellegrino, J. W., Jones, L. R., and Mitchell, K. J. (Eds.). (1999). *Grading the Nation's Report Card: Evaluating NAEP and Transforming the Assessment of Educational Progress.* Committee on the Evaluation of National and State Assessments of Educational Progress, Board on Testing and Assessment, Commission on Behavioral Social Sciences and Education, National Research Council. Washington, DC: National Academy Press.

[14] Ibid., 176.

[15] Forsyth, R. A. (2000). A Description of the Standard-Setting Procedures Used By Three Standardized Test Publishers. In M. L. Bourque, (Ed.), *Student Performance Standards on the National Assessment of Educational Progress: Affirmations and Improvements.* Washington, DC: National Assessment Governing Board. Available http://www.nagb.org/pubs

Nellhaus, J. M. (2000). States with NAEP-Like Performance Standards. In M. L. Bourque, (Ed.), *Student Performance Standards on the National Assessment of Educational Progress: Affirmations and Improvements.* Washington, DC: National Assessment Governing Board.

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However, based on the congressionally mandated evaluations so far, NCES agrees with the NAS panel's recommendation that caution needs to be exercised in the use of the current achievement levels. Therefore, NCES concludes that these achievement levels should continue to be used on a trial basis and should continue to be interpreted and used with caution.

Interpreting NAEP Results

The average scores and percentages presented in this report are estimates based on samples of students rather than on entire populations. Moreover, the collection of questions used at each grade level is but a sample of the many questions that could have been asked to assess the skills and abilities described in the NAEP writing framework. As such, the results are subject to a measure of uncertainty, reflected in the standard error of the estimates—a range of a few points plus or minus the score or percentage—which accounts for potential score or percentage fluctuation due to sampling and measurement error. The estimated standard errors for the estimated scale scores and percentages in this report are accessible through the NAEP Data Tool on the NAEP web site (http://nces.ed.gov/nationsreportcard/naepdata/). Examples of these estimated standard errors are also provided in appendix A, tables A.8 to A.12, of this report.

The differences between scale scores and between percentages discussed in the following chapters take into account the standard errors associated with the estimates. Comparisons are based on statistical tests that consider both the magnitude of the difference between the group average scores or percentages and the standard errors of those statistics. Estimates based on smaller subgroups are likely to have relatively large standard errors. As a consequence, some seemingly large differences may not be statistically significant. That is, it cannot be determined whether these differences are due to the particular makeup of the samples of students who are selected, or to true differences in the population of interest. When this is the case, the term "apparent difference" is used in this report. Differences between scores or between percentages are discussed in this report only when they are significant from a statistical perspective. All differences reported are significant at the .05 level (with appropriate adjustments for comparison between multiple subgroups of students). The term "significant" is intended to identify statistically dependable differences in average scores or percentages and not to imply a judgment about the absolute magnitude or the educational relevance of the differences.

Readers are cautioned against interpreting NAEP results in a causal sense. Inferences related to subgroup performance or to the effectiveness of public and nonpublic schools, for example, should take into consideration the many socioeconomic and educational factors that may affect writing performance.

Overview of the Remaining Report

This report describes the writing performance of fourth-, eighth-, and twelfth-graders in the nation, as well as fourth- and eighth-graders in participating states and other jurisdictions. Chapter 2 presents overall writing scale scores and achievement level results across years for both the nation and participating states and other jurisdictions. Chapter 3 discusses national results for subgroups of students by gender, race/ethnicity, parents' highest level of education (for grades 8 and 12 only), type of school (public and nonpublic), type of school location (central city, urban fringe/large town, rural/small town), Title I participation, and eligibility for free/reduced-price school lunch. State and jurisdiction results are reported by gender, race/ethnicity, and eligibility for free/reduced-price school lunch only.

Chapter 4 presents sample writing tasks and sample student responses representing varying score levels at each grade. In addition, item maps for each grade level describe the skill needed to respond to particular writing tasks and show the score points at which individual students had a high probability of successfully writing in response to particular tasks, thereby indicating the relative difficulty of each task.

The appendices of this report contain information to expand the results presented in chapters 2–4. Appendix A contains an overview of assessment development, sampling, inclusion of special-needs students and use of accommodations, administration, and analysis procedures. Appendix B presents the percentages of students in each of the subgroups reported for the nation and states or other jurisdictions. Finally, appendix C shows state-level contextual data from sources other than NAEP.

2 Average Writing Scale Score and Achievement Level Results for the Nation and States

Overview

This chapter presents the NAEP 2002 writing results for public- and nonpublic-school students in the nation at grades 4, 8, and 12 and for public-school students in participating states and jurisdictions at grades 4 and 8. Average scores on the NAEP writing composite scale range from 0 to 300; the three writing achievement levels are *Basic, Proficient,* and *Advanced.*

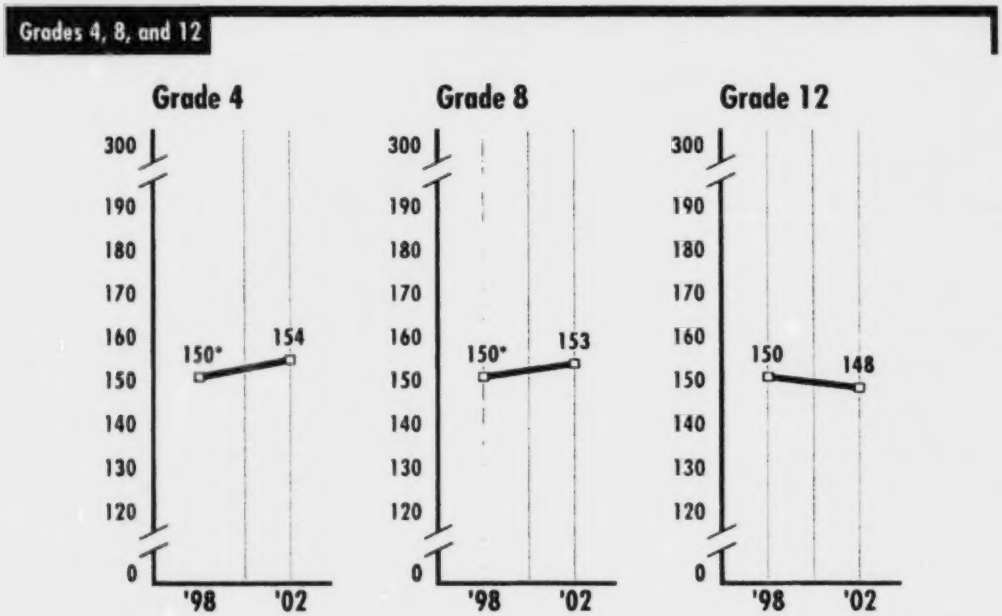
In addition to the results from the 2002 writing assessment, results are presented from 1998 for the nation at all three grades and for participating states and other jurisdictions at grade 8. There was no state-level assessment at grade 4 in 1998. At grades 4 and 8, the national sample in 2002 was a subset of the combined sample of students assessed in each participating state plus an additional sample from the states that did not participate in the state assessment. Although results were presented by region of the country (Northeast, South, Central, and West) in previous reports, regional data are not presented in this year's report because low participation in some states that did not participate in the state assessment made the comparative data for two of the regions less reliable than in the past.

National Writing Scale Score Results

Figure 2.1 displays the average writing scores from 1998 and 2002 for fourth-, eighth-, and twelfth-graders. Results for each grade are scaled independently; therefore, cross-grade score comparisons cannot be made. Students'

average scores on the NAEP writing assessment increased between 1998 and 2002 at grades 4 and 8. However, there was no significant change detected in the performance of twelfth-graders between the two assessment years.

Figure 2.1 Average writing scale scores, grades 4, 8, and 12: 1998 and 2002



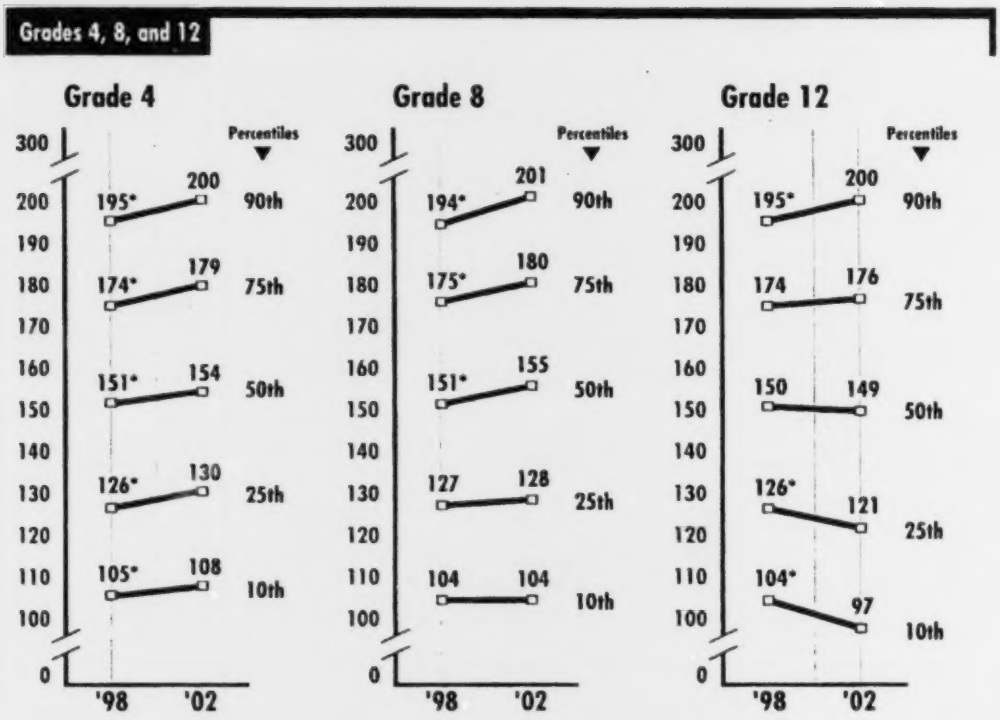
* Significantly different from 2002.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

National Writing Scale Scores by Percentile

Another way to view students' performance is by looking at how scores have changed across the performance distribution. An examination of scores at different percentiles on the 0–300 writing scale at each grade indicates whether or not the changes seen in the overall national average score results are reflected in the performance of lower-, middle-, and higher-performing students. Results for each grade are scaled independently; therefore, cross-grade score comparisons cannot be made. Figure 2.2 shows the average writing scale score for students scoring at the 10th, 25th, 50th, 75th, and 90th percentiles at all three grade levels. The percentile indicates the percentage of students whose scores fell below a particular point on the NAEP writing scale. For example, the 75th percentile score at grade 4 was 179 in 2002, indicating that 75 percent of fourth-graders scored below 179.

Increases in fourth-grade writing scores were observed across the distribution. Gains were observed among the middle- and higher-performing students at grade 8; no significant changes were detected at the 10th and 25th percentiles. At grade 12, only the score at the 90th percentile increased since 1998, while scores at the 10th and 25th percentiles were lower in 2002.

Figure 2.2 Writing scale score percentiles, grades 4, 8, and 12: 1998 and 2002



* Significantly different from 2002.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

National Writing Achievement Level Results

In addition to reporting average writing scale scores, NAEP reports writing performance by achievement levels. The writing achievement levels are *Basic*, *Proficient*, and *Advanced*. Discussion related to the setting of achievement levels is covered in chapter 1.

Figure 2.3 tracks the percentages of students performing at or above *Basic* and at or above *Proficient*—the level identified by NAGB as the level at which all students should perform—across assessment years.

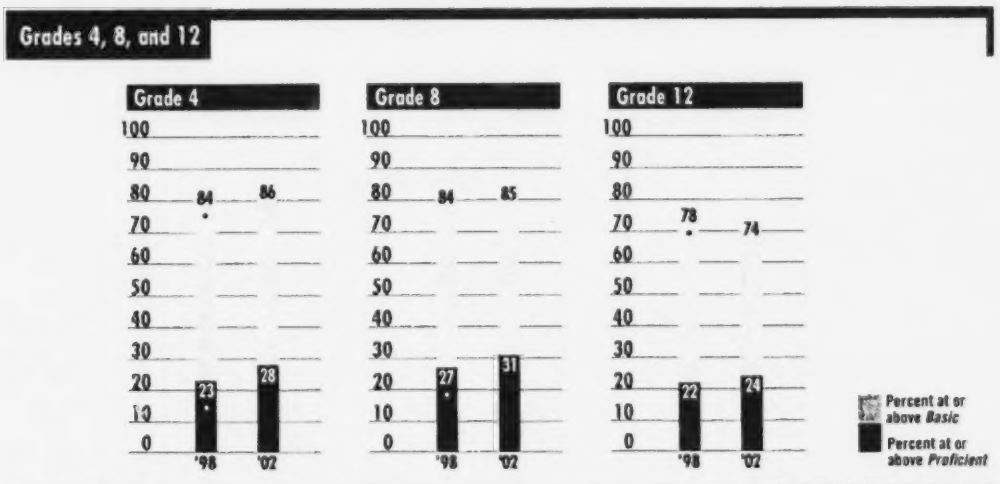
Table 2.1 presents the achievement level results in two ways for each grade: as the percentage of students within each achievement level, and as the percentage of students at or above the *Basic* level and at or above the *Proficient* level. The percentages at or above specific achievement levels are cumulative. Included among the percentage of students at or above the *Basic* level are those who have achieved the *Proficient* and *Advanced* levels of performance. Included among students at or above the *Proficient* level are those who

have attained the *Advanced* level of performance. Although significant differences in the percentages of students within achievement levels are indicated in the table, only the differences at or above *Basic*, at or above *Proficient*, and at *Advanced* are discussed in this section.

In 2002, between 24 and 31 percent of the students in each of the three grades performed at or above the *Proficient* level. Figure 2.3 shows that fourth- and eighth-graders have made overall gains since 1998 in reaching the *Proficient* level, while there was no significant change detected in the percentage of twelfth-graders at or above this level over the same period of time.

As shown in more detail in table 2.1, trends in achievement level results are generally consistent with trends in average scale score results since 1998 that are described in the previous section. The percentages of fourth-graders at or above *Basic* and at or above *Proficient* increased over the period between the 1998 and 2002 assessments. No significant change was observed in the percentage of eighth-graders performing at or above *Basic*, while the percentage of eighth-grade students performing at or above *Proficient* increased over the same interval. The percentage of twelfth-graders performing at or above *Basic* decreased since 1998. Although only 2 percent of the students in each grade performed at the *Advanced* level in 2002, this did reflect an increase over the percentages in 1998.

Figure 2.3 Percentage of students at or above *Basic* and *Proficient* in writing, grades 4, 8, and 12: 1998 and 2002



* Significantly different from 2002.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table 2.1 Percentage of students, by writing achievement level, grades 4, 8, and 12: 1998 and 2002

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4							
	1998	16 *	61 *	22 *	1 *	84 *	23 *
	2002	14	58	26	2	86	28
Grade 8							
	1998	16	58 *	25 *	1 *	84	27 *
	2002	15	54	29	2	85	31
Grade 12							
	1998	22 *	57 *	21	1 *	78 *	22
	2002	26	51	22	2	74	24

* Significantly different from 2002.
NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

Writing Results for States and Other Jurisdictions

In addition to the national results, writing performance data were collected for fourth- and eighth-grade students attending public schools in states and other jurisdictions that chose to participate in the 2002 assessment.[1] Although 50 jurisdictions participated in the 2002 writing assessment at grade 4, and 50 participated at grade 8, not all met minimum school participation guidelines for reporting their results. (See appendix A for details on participation and reporting guidelines.) Results from the 2002 assessment are not included for Illinois and Wisconsin at grades 4 and 8, and for Minnesota at grade 8, because they did not meet the minimum weighted school participation rate of 70 percent. Jurisdictions that did not meet one or more of the other participation guidelines are noted in each of the tables. Information about students' writing achievement in selected urban school districts (Atlanta, Chicago, Houston, Los Angeles, and New York City) is available in the forthcoming *NAEP Trial Urban District Assessment Writing 2002.*

Results are presented for jurisdictions that participated in the 2002 writing assessment at grade 4, and in the 1998 and 2002 assessments at grade 8. Tables presenting state level results at grade 8 indicate statistically significant changes across years when examining only one jurisdiction at a time (*), or when using a multiple comparison procedure based on all the jurisdictions that participated (**). Differences discussed in this report are based on statistically significant findings detected using either comparison procedure. (See appendix A for a more detailed discussion of comparison procedures.)

[1] Throughout this chapter the term jurisdiction is used to refer to the states, territories, and Department of Defense schools that participated in the NAEP writing assessments.

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Writing Scale Score Results by State/Jurisdiction

Average writing scale scores by jurisdiction are shown in table 2.2 for grade 4, and table 2.3 for grade 8. Whereas the national results presented in the previous sections of this chapter represent both public and nonpublic schools combined, the national average scores shown in each of these tables represent the performance of public-school students only.

Average fourth-grade scores ranged from 125 to 174. Of the 36 jurisdictions that participated in both the 1998 and 2002 eighth-grade writing assessments, 16 showed score increases in 2002, and none showed a significant decrease.

Table 2.2 Average writing scale scores, grade 4 public schools: By state, 2002

Grade 4	2002
Nation (Public)	153
Alabama	140
Arizona	140
Arkansas	145
California !	146
Connecticut	174
Delaware	163
Florida	158
Georgia	149
Hawaii	149
Idaho	150
Indiana	154
Iowa !	155
Kansas !	149
Kentucky	154
Louisiana	142
Maine	158
Maryland	157
Massachusetts	170
Michigan	147
Minnesota !	156
Mississippi	141
Missouri	151
Montana !	149
Nebraska	154
Nevada	145
New Mexico	142
New York !	163
North Carolina	159
North Dakota !	150
Ohio	157
Oklahoma	142
Oregon	149
Pennsylvania	156
Rhode Island	157
South Carolina	145
Tennessee !	149
Texas	154
Utah	145
Vermont	158
Virginia	157
Washington !	158
West Virginia	147
Wyoming	150
Other Jurisdictions	
District of Columbia	135
DDESS [1]	156
DoDDS [2]	159
Guam	131
Virgin Islands	125

! Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 2.3 Average writing scale scores, grade 8 public schools: By state, 1998 and 2002

Grade 8	1998	2002
Nation (Public) [1]	148 *	152
Alabama	144	142
Arizona	143	141
Arkansas	137 *,**	142
California ‡	141	144
Colorado	151	—
Connecticut	165	164
Delaware	144 *,**	159
Florida	142 *,**	154
Georgia	146	147
Hawaii	135	138
Idaho	—	151
Indiana	—	150
Kansas ‡	—	155
Kentucky	146	149
Louisiana	136 *,**	142
Maine	155	157
Maryland	147 *,**	157
Massachusetts	155 *,**	163
Michigan	—	147
Minnesota ‡	148	—
Mississippi	134 *,**	141
Missouri	142 *,**	151
Montana ‡	150	152
Nebraska	—	156
Nevada	140	137
New Mexico	141	140
New York ‡	146 *,**	151
North Carolina	150 *,**	157
North Dakota ‡	—	147
Ohio	—	160
Oklahoma	152	150
Oregon ‡	149 *	155
Pennsylvania	—	154
Rhode Island	148 *,**	151
South Carolina	140 *,**	146
Tennessee ‡	148	148
Texas	154	152
Utah	143	143
Vermont	—	163
Virginia	153	157
Washington ‡	148 *,**	155
West Virginia	144	144
Wisconsin ‡	153	—
Wyoming	146 *,**	151
Other Jurisdictions		
American Samoa	—	95
District of Columbia	126	128
DDESS [2]	160	164
DoDDS [3]	156 *,**	161
Guam	—	130
Virgin Islands	124	128

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdiction or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
[1] National results for the 1998 assessment are based on the national sample, not an aggregated state assessment samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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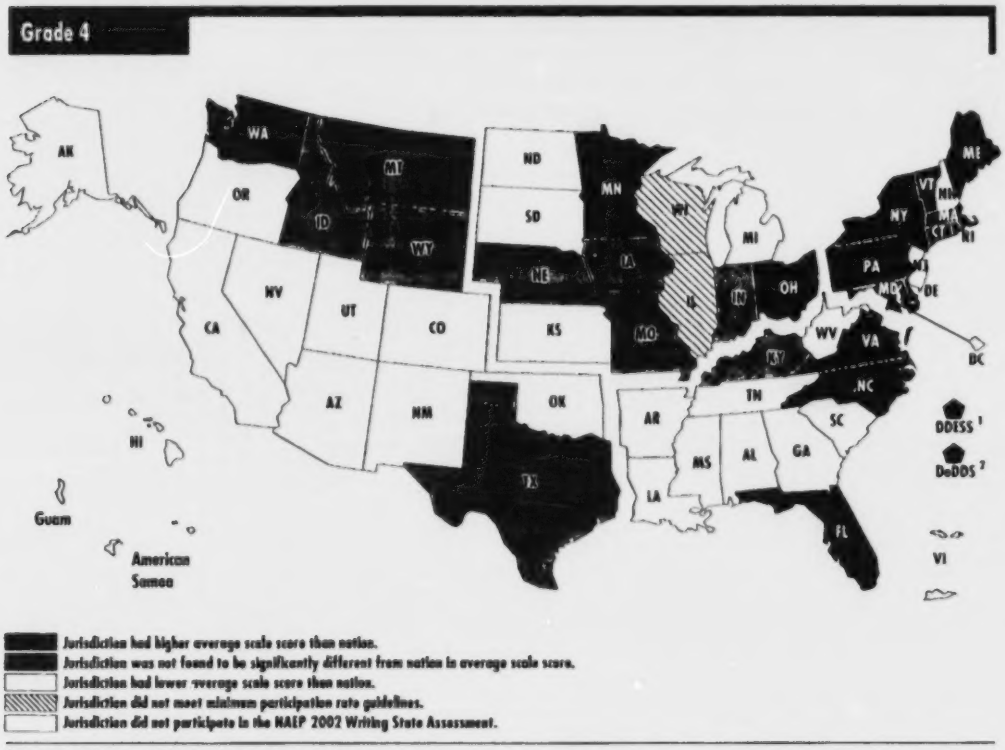
The maps in figures 2.4 and 2.5 compare state and national average writing scores in 2002 at grades 4 and 8 respectively. At grade 4, 17 jurisdictions had scores that were higher than the national average scores, 22 had scores that were lower than the national average, and no significant differences were detected between the jurisdiction and national averages for 9 jurisdictions. At grade 8, 12 jurisdictions had scores that were higher than the national average scores, 20 had scores that were lower than the national average, and no significant differences were detected between the state and national average for 15 jurisdictions.

Figure 2.4 Comparison of state and national public school average writing scale scores, grade 4: 2002



[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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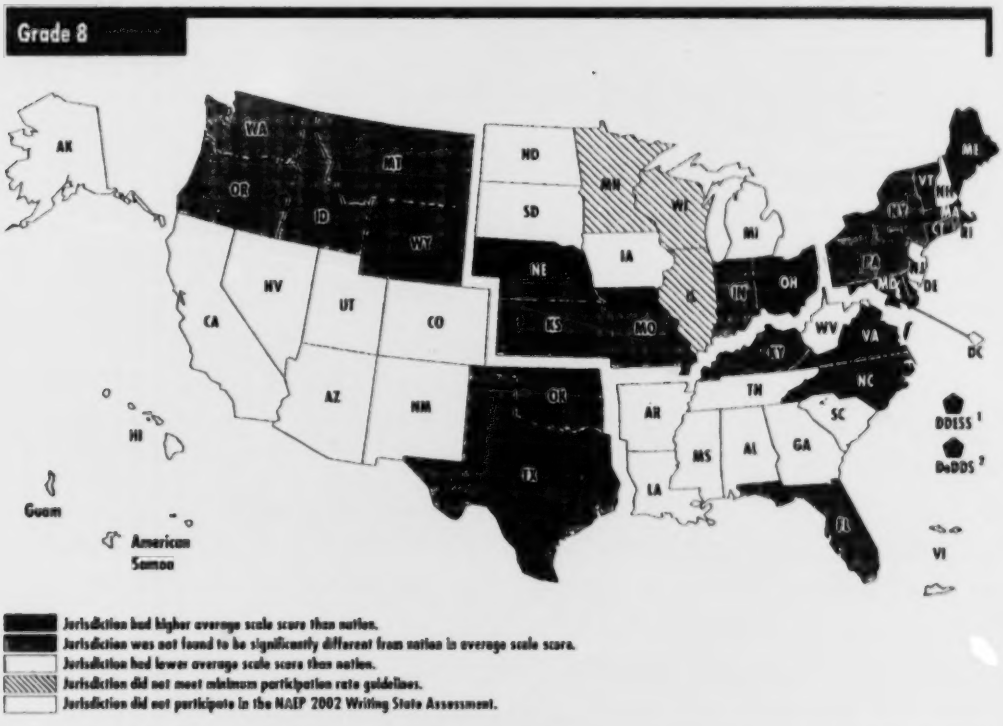
Figure 2.5 Comparison of state and national public school average writing scale scores, grade 8: 2002



[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Cross-State/Jurisdiction Writing Scale Score Comparisons

Figures 2.6 and 2.7 display the differences in the NAEP 2002 average writing scale scores between any two participating jurisdictions at grades 4 and 8 respectively. These figures are set up similarly to mileage charts on travel maps. On the line across the top of the figure, find the name of the target jurisdiction and follow the column below the target jurisdiction to the jurisdiction chosen for comparison. If the cell of the comparison jurisdiction is not shaded, no statistically significant difference between the scale scores of the two jurisdictions was detected. If the cell of the comparison jurisdiction is lightly shaded, the average scale score of that jurisdiction was higher than the scale score of the target jurisdiction named at the top of the column. Darkly shaded cells indicate that the average scale score of the comparison jurisdiction was lower than that of the target jurisdiction selected at the top of the column.

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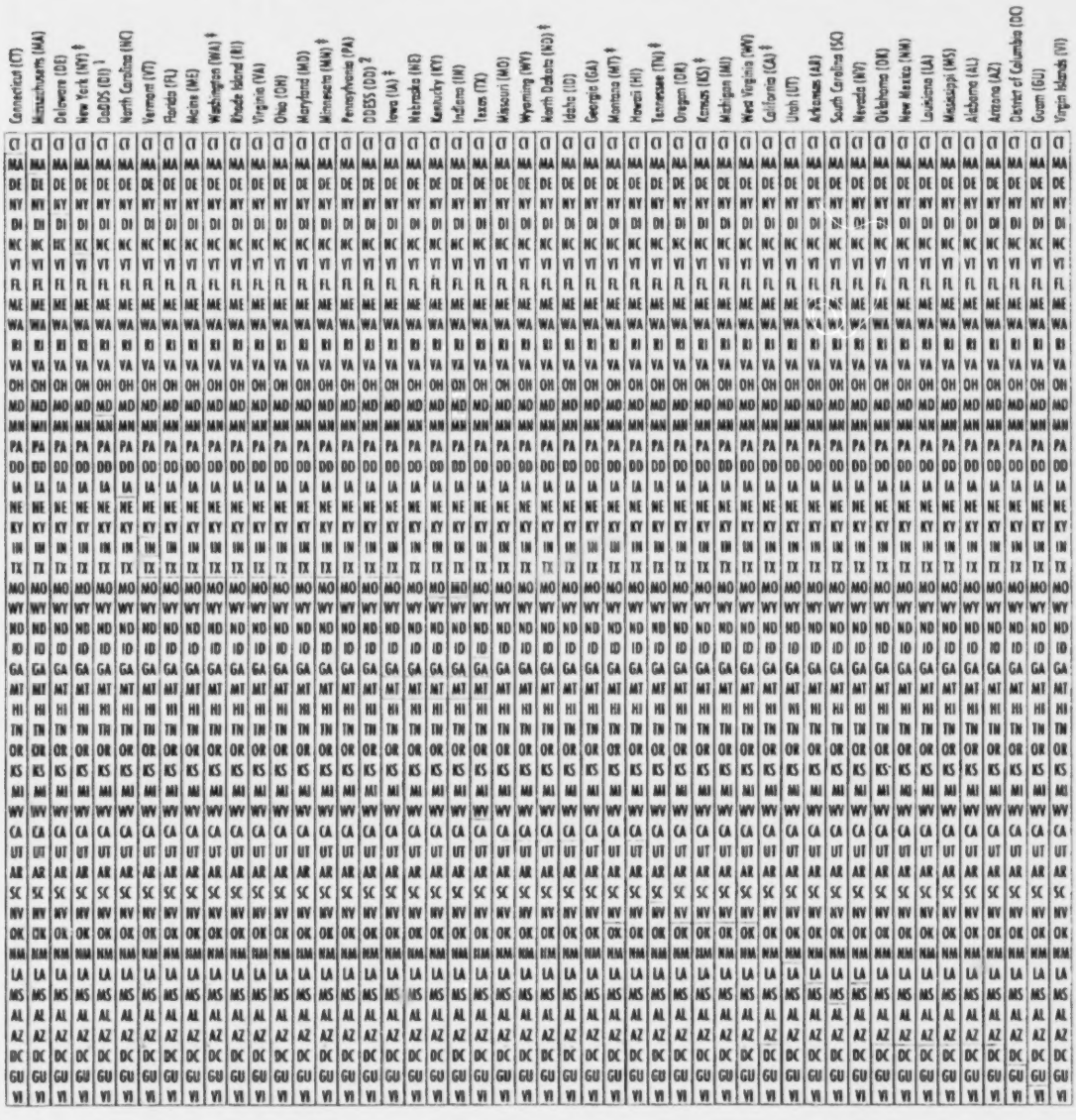
At grade 4, Connecticut, Massachusetts, and Delaware were among the highest performing jurisdictions. The average writing score in Connecticut was higher than in any of the other participating jurisdictions. Massachusetts was outperformed only by Connecticut. Students in Delaware were outperformed only by students in Connecticut and Massachusetts and had higher scores than the other participating jurisdictions except New York.

At grade 8, Connecticut, Department of Defense domestic and overseas schools, Massachusetts, and Vermont were among the highest performing jurisdictions, and were not found to differ significantly from each other and had higher scores than the other participating jurisdictions except Ohio.

Figure 2.6 Cross-state comparison of average writing scale scores, grade 4 public schools: 2002

Grade 4

Instructions: Read down the column directly under a jurisdiction name listed in the heading at the top of the chart. Match the shading intensity surrounding a jurisdiction's abbreviation to the key below to determine whether the average writing scale score of this jurisdiction was found to be higher than, not significantly different from, or lower than the jurisdiction in the column heading. For example, note the column under North Carolina: North Carolina's score was lower than Connecticut, Massachusetts, and Delaware, about the same as all the states from New York through Iowa, and higher than the remaining states down the column.



Jurisdiction had higher average scale score than the jurisdiction listed at the top of the figure.

No significant difference detected from the jurisdiction listed at the top of the figure.

Jurisdiction had lower average scale score than the jurisdiction listed at the top of the figure.

‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

1 Department of Defense Dependents Schools (Overseas).

2 Department of Defense Domestic Dependent Elementary and Secondary Schools.

NOTE: The between-jurisdiction comparisons take into account sampling and measurement error and that each jurisdiction is being compared with every other jurisdiction. Significance is determined by an application of a multiple-comparison procedure (see appendix A).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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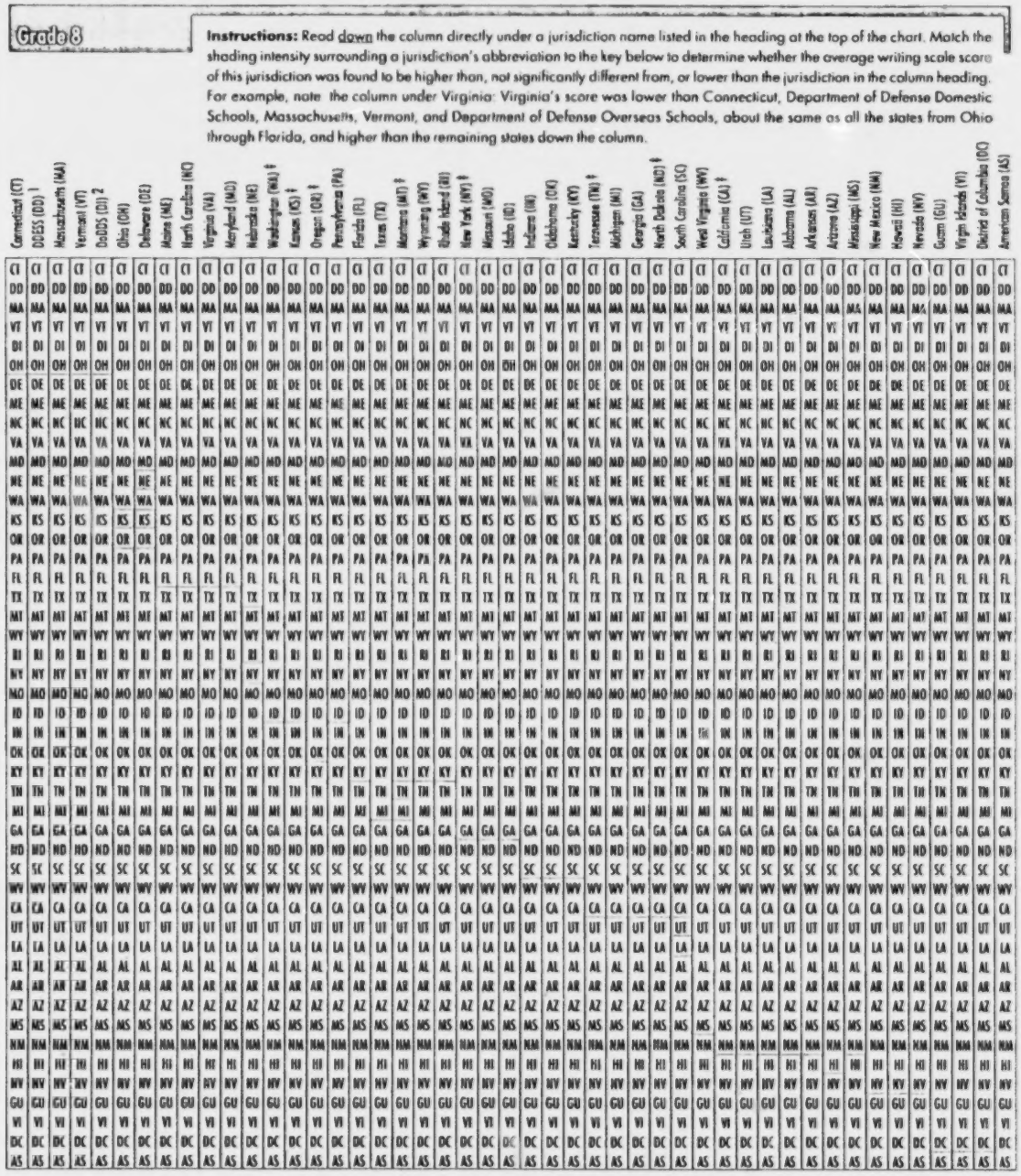
Figure 2.7 Cross-state comparison of average writing scale scores, grade 8 public schools: 2002


Grade 8
Instructions: Read down the column directly under a jurisdiction name listed in the heading at the top of the chart. Match the shading intensity surrounding a jurisdiction's abbreviation to the key below to determine whether the average writing scale score of this jurisdiction was found to be higher than, not significantly different from, or lower than the jurisdiction in the column heading. For example, note the column under Virginia: Virginia's score was lower than Connecticut, Department of Defense Domestic Schools, Massachusetts, Vermont, and Department of Defense Overseas Schools, about the same as all the states from Ohio through Florida, and higher than the remaining states down the column.
Connecticut (CT)
DDESS (DD) 1
Massachusetts (MA)
Vermont (VT)
DoDDS (DI) 2
Ohio (OH)
Delaware (DE)
Maine (ME)
North Carolina (NC)
Virginia (VA)
Maryland (MD)
Nebraska (NE)
Washington (WA) ‡
Kansas (KS) ‡
Oregon (OR) ‡
Pennsylvania (PA)
Florida (FL)
Texas (TX)
Montana (MT) ‡
Wyoming (WY)
Rhode Island (RI)
New York (NY) ‡
Missouri (MO)
Idaho (ID)
Indiana (IN)
Oklahoma (OK)
Kentucky (KY)
Tennessee (TN) ‡
Michigan (MI)
Georgia (GA)
North Dakota (ND) ‡
South Carolina (SC)
West Virginia (WV)
California (CA) ‡
Utah (UT)
Louisiana (LA)
Alabama (AL)
Arkansas (AR)
Arizona (AZ)
Mississippi (MS)
New Mexico (NM)
Hawaii (HI)
Nevada (NV)
Guam (GU)
Virgin Islands (VI)
District of Columbia (DC)
American Samoa (AS)

Jurisdiction had higher average scale score than the jurisdiction listed at the top of the figure.

No significant difference detected from the jurisdiction listed at the top of the figure.

Jurisdiction had lower average scale score than the jurisdiction listed at the top of the figure.

‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

1 Department of Defense Domestic Dependent Elementary and Secondary Schools.

2 Department of Defense Dependents Schools (Overseas).

NOTE: The between-jurisdiction comparisons take into account sampling and measurement error and that each jurisdiction is being compared with every other jurisdiction. Significance is determined by an application of a multiple-comparison procedure (see appendix A).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Writing Achievement Level Results by State/Jurisdiction

Achievement level results for jurisdictions are presented both as the percentage of students scoring within each writing achievement level range and as the percentage of students performing at or above the *Proficient* level. The percentage of students within each writing achievement level range for participating jurisdictions in 2002 is presented in figure 2.8 for grade 4 and in figure 2.9 for grade 8. The shaded bars represent the proportion of students in each of the three achievement levels (*Basic*, *Proficient*, and *Advanced*), as well as the proportion of students who performed below the *Basic* level. Each population of students is aligned at the point where the *Proficient* level begins; scanning down the horizontal bars to examine the data on the right allows comparison with the percentage of students who were at or above *Proficient*. Jurisdictions are listed in the figures in three clusters based on a statistical comparison of the percentage of students at or above *Proficient* in each jurisdiction with the national percentage of public-school students at or above *Proficient*. The jurisdictions in the top cluster of each figure had a higher percentage of students who were at or above the *Proficient* level compared to the nation. The percentages of students in jurisdictions clustered in the middle were not found to differ significantly from the national percentage. Jurisdictions in the bottom cluster had percentages lower than the national percentage. Within each cluster, jurisdictions are listed alphabetically.

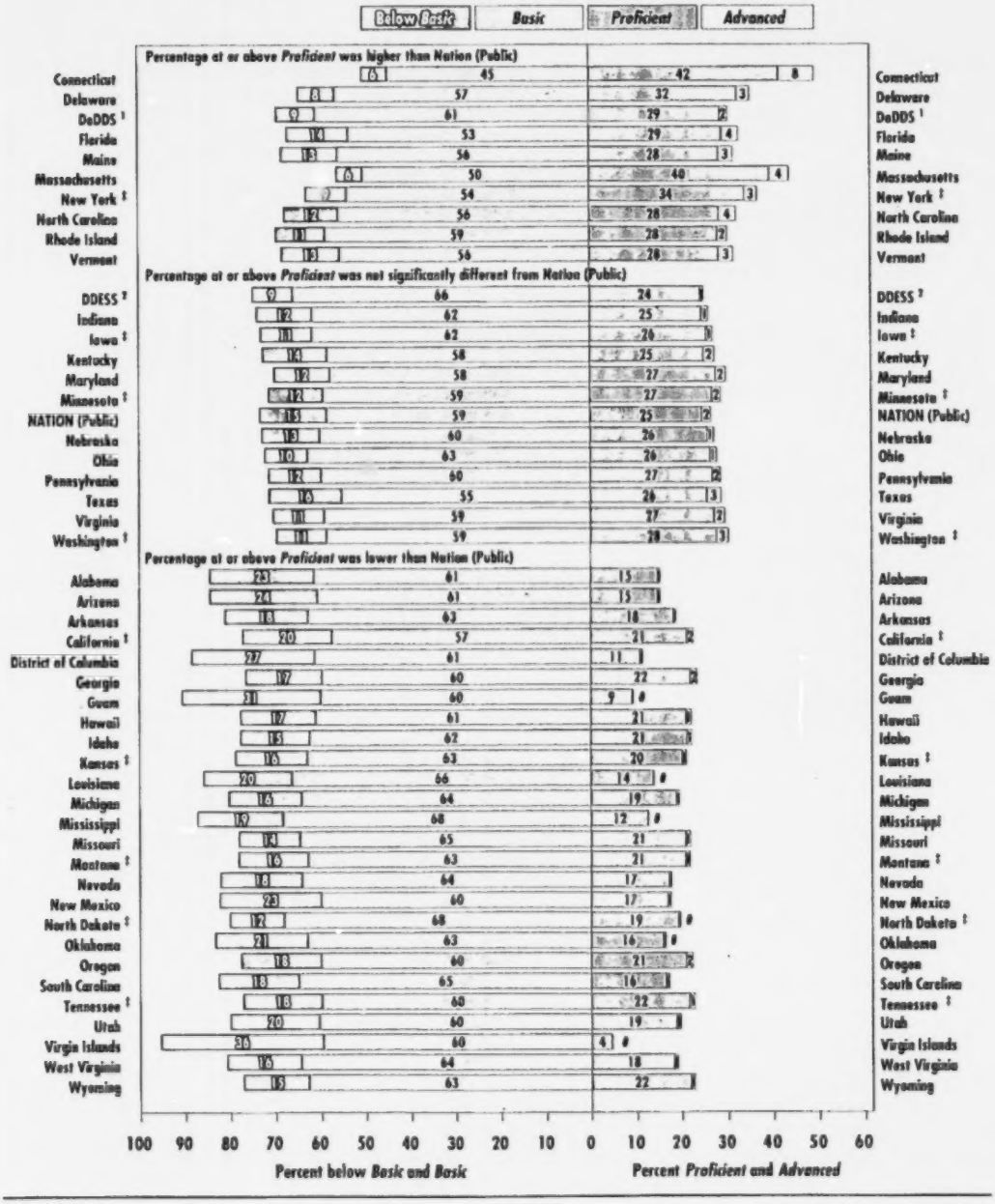
Figure 2.8 shows that, at grade 4, 10 jurisdictions had higher percentages of students performing at or above the *Proficient* level than the nation, 12 had percentages that were not found to differ significantly from the nation, and 26 had percentages that were lower than the nation.

In figure 2.9, the results for grade 8 show 10 jurisdictions with higher percentages of students performing at or above the *Proficient* level than the nation, 15 with percentages that were not found to differ significantly from the nation, and 22 with percentages that were lower than the nation.

Figure 2.8 Percentage of students within each writing achievement level range, grade 4 public schools: By state, 2002

Grade 4

The bars below contain percentages of students in each NAEP writing achievement level range. Each population of students is aligned at the point where the *Proficient* category begins, so that they may be compared at *Proficient* and above. States are listed alphabetically within three groups: the percentage at or above *Proficient* was higher than, not found to be significantly different from, or lower than the nation.


Below Basic
Basic
Proficient
Advanced
Percentage at or above Proficient was higher than Nation (Public)
Connecticut 6 45 42 8
Delaware 8 57 32 3
DoDDS ¹ 9 61 29 2
Florida 14 53 29 4
Maine 13 56 28 3
Massachusetts 6 50 40 4
New York ‡ 9 54 34 3
North Carolina 12 56 28 4
Rhode Island 11 59 28 2
Vermont 13 56 28 3
Percentage at or above Proficient was not significantly different from Nation (Public)
DDESS ² 9 66 24
Indiana 12 62 25
Iowa ‡ 11 62 26
Kentucky 13 58 25 2
Maryland 12 58 27 2
Minnesota ‡ 13 59 27 2
NATION (Public) 13 59 25 2
Nebraska 13 60 26
Ohio 10 63 26
Pennsylvania 12 60 27 2
Texas 15 55 26 3
Virginia 11 59 27 2
Washington ‡ 11 59 28 3
Percentage at or above Proficient was lower than Nation (Public)
Alabama 23 61 15
Arizona 24 61 15
Arkansas 18 63 18
California ‡ 20 57 21 2
District of Columbia 27 61 11
Georgia 17 60 22 2
Guam 31 60 9 #
Hawaii 17 61 21
Idaho 15 62 21
Kansas ‡ 16 63 20
Louisiana 29 66 14 #
Michigan 16 64 19
Mississippi 19 68 12 #
Missouri 14 65 21
Montana ‡ 16 63 21
Nevada 18 64 17
New Mexico 23 60 17
North Dakota ‡ 12 68 19 #
Oklahoma 21 63 16 #
Oregon 18 60 21 2
South Carolina 18 65 16
Tennessee ‡ 18 60 22
Utah 20 60 19
Virgin Islands 36 60 4 #
West Virginia 16 64 18
Wyoming 15 63 22
100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60
Percent below Basic and Basic
Percent Proficient and Advanced

Percentage rounds to zero.
‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
¹ Department of Defense Dependents Schools (Overseas).
² Department of Defense Domestic Dependent Elementary and Secondary Schools.
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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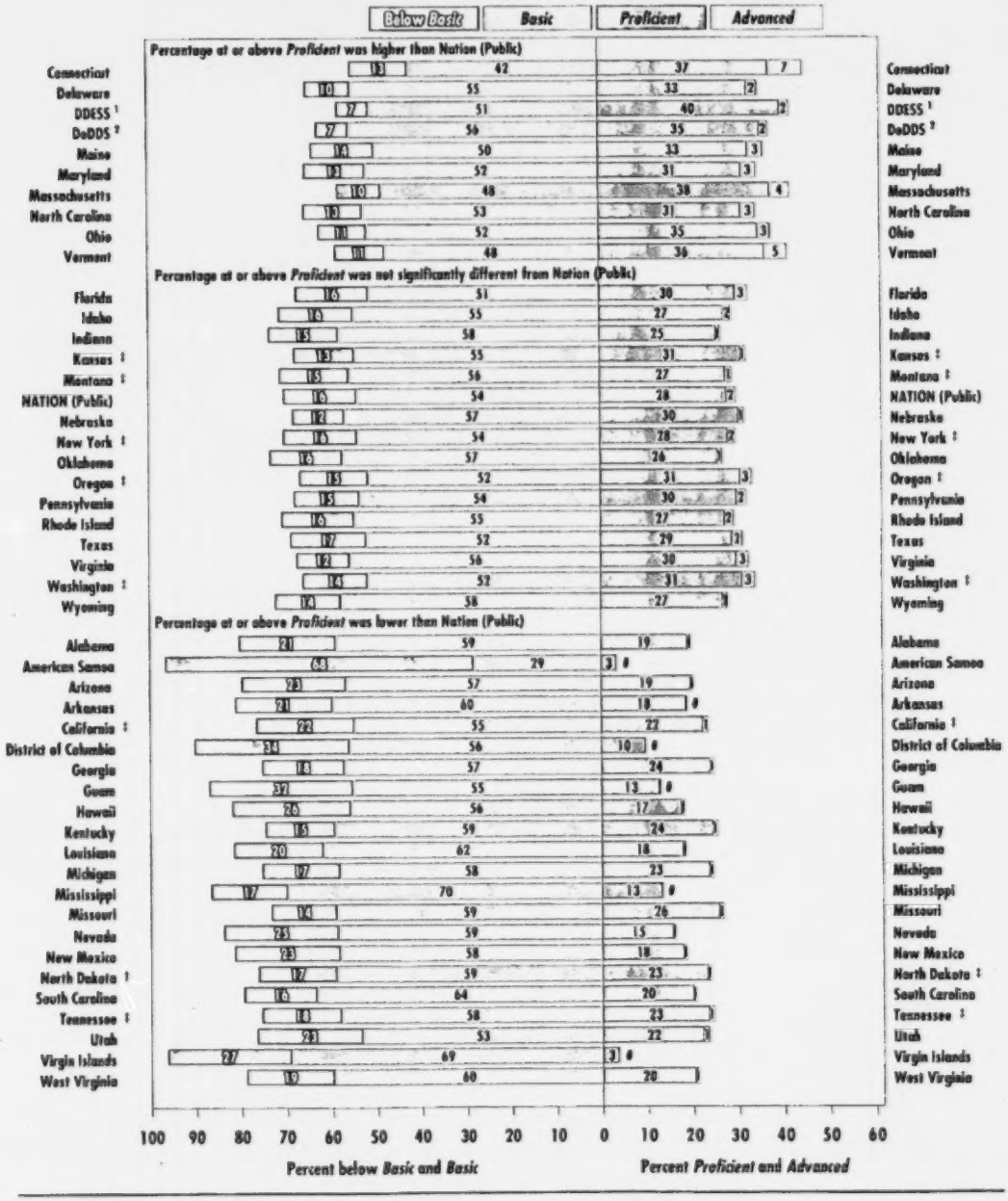
Figure 2.9 Percentage of students within each writing achievement level range, grade 8 public schools: By state, 2002

Grade 8

The bars below contain percentages of students in each NAEP writing achievement level range. Each population of students is aligned at the point where the *Proficient* category begins, so that they may be compared at *Proficient* and above. States are listed alphabetically within three groups: the percentage at or above *Proficient* was higher than, not found to be significantly different from, or lower than the nation.


Below Basic
Basic
Proficient
Advanced
Percentage at or above Proficient was higher than Nation (Public)
Connecticut 13 42 37 7
Delaware 10 55 33 2
DDESS ! 7 51 40 2
DoDDS ? 7 56 35 2
Maine 15 50 33 3
Maryland 13 52 31 3
Massachusetts 10 48 38 4
North Carolina 13 53 31 3
Ohio 11 52 35 3
Vermont 11 48 36 5
Percentage at or above Proficient was not significantly different from Nation (Public)
Florida 16 51 30 3
Idaho 10 55 27 2
Indiana 15 58 25
Kansas ! 13 55 31
Montana ! 15 56 27 1
NATION (Public) 16 54 28 2
Nebraska 12 57 30
New York ! 16 54 28 2
Oklahoma 15 57 26
Oregon ! 15 52 31 3
Pennsylvania 15 54 30 2
Rhode Island 16 55 27 2
Texas 12 52 29 3
Virginia 12 56 30 3
Washington ! 14 52 31 3
Wyoming 14 58 27
Percentage at or above Proficient was lower than Nation (Public)
Alabama 21 59 19
American Samoa 68 29 3 #
Arizona 23 57 19
Arkansas 21 60 18 #
California ! 22 55 22 1
District of Columbia 34 56 10 #
Georgia 13 57 24
Guam 32 55 13 #
Hawaii 26 56 17
Kentucky 15 59 24
Louisiana 20 62 18
Michigan 17 58 23
Mississippi 17 70 13 #
Missouri 14 59 26
Nevada 25 59 15
New Mexico 23 58 18
North Dakota ! 17 59 23
South Carolina 16 64 20
Tennessee ! 13 58 28
Utah 23 53 22
Virgin Islands 27 69 3 #
West Virginia 19 60 20
100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60
Percent below Basic and Basic
Percent Proficient and Advanced

Percentage rounds to zero.
! Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
1 Department of Defense Domestic Dependent Elementary and Secondary Schools.
2 Department of Defense Dependents Schools (Overseas).
NOTE: Percentages may not add to 100 due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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The percentage of fourth-graders performing at or above the *Proficient* level for each jurisdiction that participated in the 2002 assessment is presented in table 2.4. The percentage of fourth-graders performing at or above the *Proficient* level ranged from 4 to 49 percent.

The percentages of eighth-graders at or above *Proficient* for jurisdictions that participated in 1998 and 2002 are presented in table 2.5. The percentage of eighth-graders performing at or above *Proficient* increased since 1998 in 17 jurisdictions, and decreased in 1 jurisdiction.

Table 2.4 Percentage of students at or above *Proficient* in writing, grade 4 public schools: By state, 2002

Grade 4	2002
Nation (Public)	27
Alabama	15
Arizona	15
Arkansas	19
California [!]	23
Connecticut	49
Delaware	35
Florida	33
Georgia	23
Hawaii	22
Idaho	22
Indiana	26
Iowa [!]	27
Kansas [!]	21
Kentucky	27
Louisiana	14
Maine	32
Maryland	30
Massachusetts	44
Michigan	19
Minnesota [!]	29
Mississippi	13
Missouri	22
Montana [!]	22
Nebraska	27
Nevada	18
New Mexico	18
New York [!]	37
North Carolina	32
North Dakota [!]	20
Ohio	28
Oklahoma	16
Oregon	22
Pennsylvania	29
Rhode Island	30
South Carolina	17
Tennessee [!]	23
Texas	29
Utah	20
Vermont	32
Virginia	29
Washington [!]	30
West Virginia	19
Wyoming	23
Other Jurisdictions	
District of Columbia	11
DDESS [1]	25
DoDDS [2]	30
Guam	9
Virgin Islands	4

[!] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 2.5 Percentage of students at or above *Proficient* in writing, grade 8 public schools: By state, 1998 and 2002

Grade 8	1998	2002
Nation (Public) [1]	24 *	30
Alabama	17	20
Arizona	21	20
Arkansas	13 *,**	19
California [1]	20	23
Colorado	27	—
Connecticut	44	45
Delaware	22 *,**	35
Florida	19 *,**	32
Georgia	23	25
Hawaii	15 *	18
Idaho	—	29
Indiana	—	26
Kansas [1]	—	32
Kentucky	21	25
Louisiana	12 *,**	18
Maine	32	36
Maryland	23 *,**	35
Massachusetts	31 *,**	42
Michigan	—	24
Minnesota [1]	25	—
Mississippi	11	13
Missouri	17 *,**	27
Montana [1]	25	29
Nebraska	—	32
Nevada	17	16
New Mexico	18	18
New York [1]	21 *,**	30
North Carolina	27 *,**	34
North Dakota [1]	—	24
Ohio	—	38
Oklahoma	25	27
Oregon [1]	27 *,**	33
Pennsylvania	—	32
Rhode Island	25 *,**	29
South Carolina	15 *,**	20
Tennessee [1]	24	24
Texas	31	31
Utah	21	23
Vermont	—	41
Virginia	27 *	32
Washington [1]	25 *,**	34
West Virginia	18	21
Wisconsin [1]	28	—
Wyoming	23 *	28
Other Jurisdictions		
American Samoa	—	3
District of Columbia	11	10
DDESS [2]	38	42
DoDDS [3]	31 *,**	37
Guam	—	13
Virgin Islands	9 *	3

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
[1] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdiction or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
[1] National results for the 1998 assessment are based on the national sample, not on aggregated state assessment samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[3] Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Cross-State/Jurisdiction Writing Achievement Level Comparisons

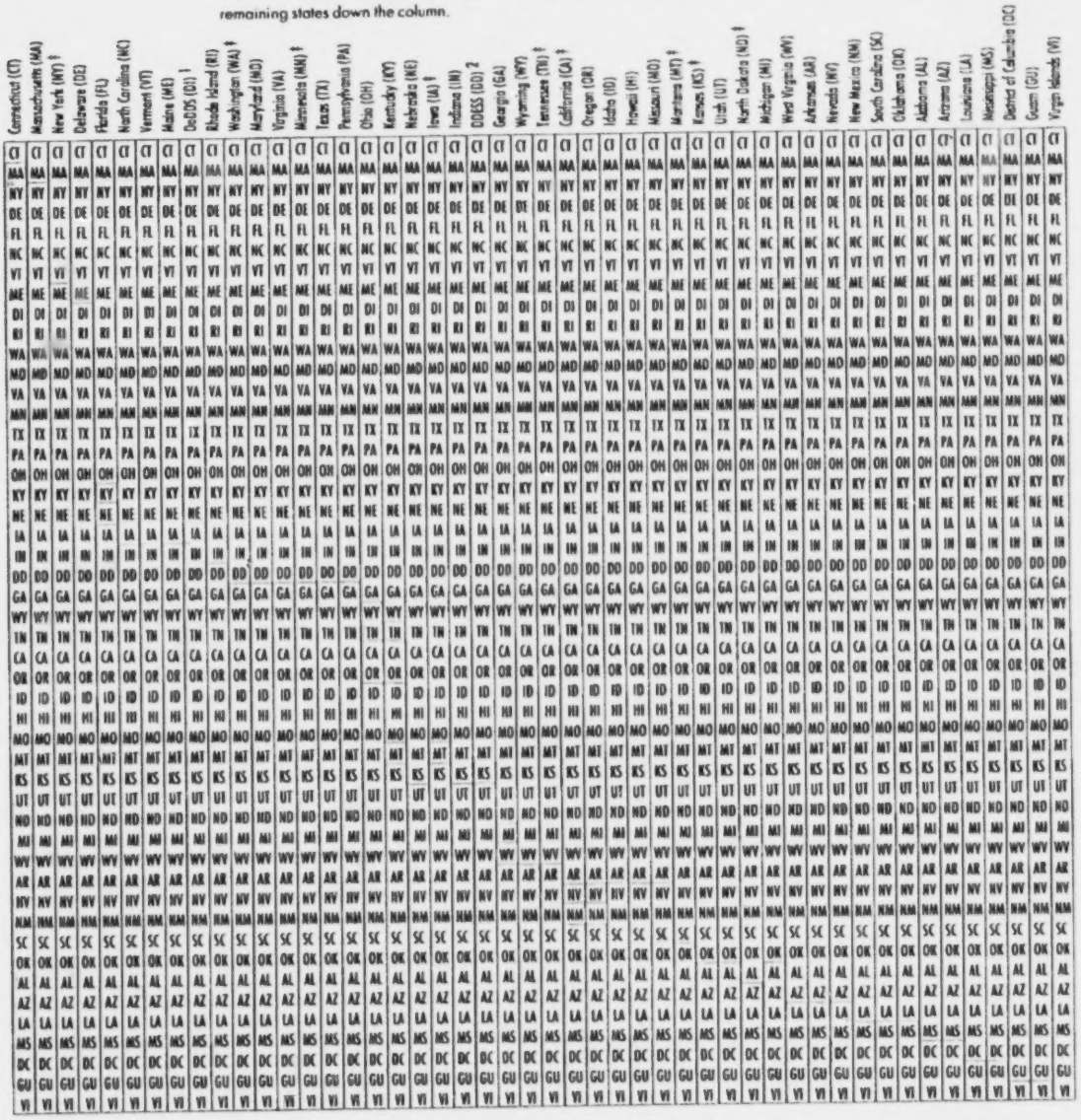
Figures 2.10 and 2.11 display the same type of cross-state/jurisdiction comparisons that were presented earlier for scale score results, but the performance measure being compared in these figures is the percentage of students performing at or above the *Proficient* level in 2002 for grades 4 and 8 respectively.

At grade 4, Connecticut had a higher percentage of students performing at or above *Proficient* than Massachusetts, and both had higher percentages than the other participating jurisdictions. At grade 8, Connecticut, Massachusetts, Department of Defense domestic schools, and Vermont were among the states with the highest percentages of students performing at or above *Proficient*, but were not found to differ significantly from each other.

Figure 2.10 Cross-state comparison of percentage of students at or above *Proficient* in writing, grade 4 public schools: 2002

Grade 4

Instructions: Read down the column directly under a jurisdiction name listed in the heading at the top of the chart. Match the shading intensity surrounding a jurisdiction's abbreviation with the key below to determine whether the percentage of students at or above *Proficient* in this jurisdiction was found to be higher than, not significantly different from, or lower than the jurisdiction in the column heading. For example, in the column under Vermont, the percentage of students at or above *Proficient* in Vermont was lower than Connecticut and Massachusetts, about the same as all the states from New York through Iowa, and higher than the remaining states down the column.



Jurisdiction had higher percentage than the jurisdiction listed at the top of the figure.

No significant difference detected from the jurisdiction listed at the top of the figure.

Jurisdiction had lower percentage than the jurisdiction listed at the top of the figure.

‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

[1] Department of Defense Dependents Schools (Overseas).

[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.

NOTE: The between-jurisdiction comparisons take into account sampling and measurement error and that each jurisdiction is being compared with every other jurisdiction. Significance is determined by an application of a multiple-comparison procedure (see appendix A).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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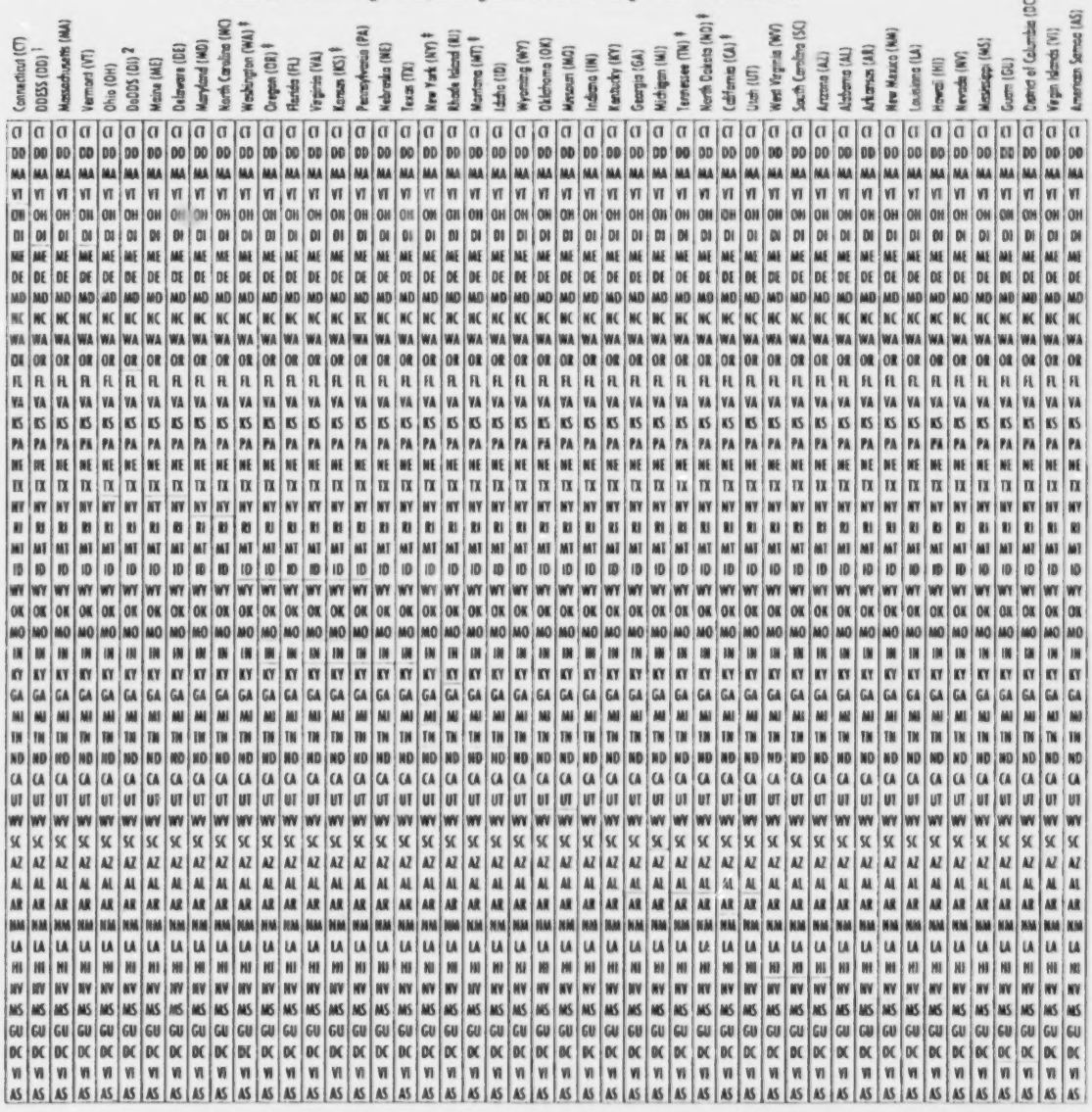
Figure 2.11 Cross-state comparison of percentage of students at or above *Proficient* in writing, grade 8 public schools: 2002

Grade 8

Instructions: Read down the column directly under a jurisdiction name listed in the heading at the top of the chart. Match the shading intensity surrounding a jurisdiction's abbreviation with the key below to determine whether the percentage of students at or above *Proficient* in this jurisdiction was found to be higher than, not significantly different from, or lower than the jurisdiction in the column heading. For example, in the column under Delaware, the percentage of students at or above *Proficient* in Delaware was lower than Connecticut, Department of Defense Domestic Schools, Massachusetts, and Vermont, about the same as all the states from Ohio through Texas, and higher than the remaining states down the column.



Jurisdiction had higher percentage than the jurisdiction listed at the top of the figure.

No significant difference detected from the jurisdiction listed at the top of the figure.

Jurisdiction had lower percentage than the jurisdiction listed at the top of the figure.

† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[2] Department of Defense Dependents Schools (Overseas).

NOTE: The between-jurisdiction comparisons take into account sampling and measurement error and that each jurisdiction is being compared with every other jurisdiction. Significance is determined by an application of a multiple-comparison procedure (see appendix A).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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3 Subgroup Results for the Nation and States

In addition to reporting on the performance of all students, NAEP also provides results for a variety of subgroups of students for each grade level assessed. The subgroup results show not only how these groups of students performed in comparison with one another, but also the progress each group has made over time. The information presented in this chapter is a valuable indicator of how well the nation is progressing toward the goal of improving the achievement of all students.

This chapter includes average writing scale scores and achievement level results for subgroups of students in the nation at grades 4, 8, and 12, and in participating jurisdictions at grades 4 and 8. National results are reported by gender, race/ethnicity, students' eligibility for free/reduced-price school lunch, school's participation in Title I, parents' highest level of education, type of school, and type of school location. Results for participating jurisdictions are presented by gender, race/ethnicity, and students' eligibility for free/reduced-price school lunch. Descriptions of these subgroups are included in appendix A under "NAEP Reporting Groups." The weighted percentage of students corresponding with each subgroup reported in this chapter can be found in appendix B. Additional subgroup results for each jurisdiction that participated in the NAEP writing assessment are available on the NAEP web site (http://nces.ed.gov/nationsreportcard/naepdata).

Differences in students' performance on the 2002 writing assessment between demographic subgroups and across years for a particular subgroup are discussed only if they have been determined to be statistically significant. The reader should bear in mind that the estimated scale score for a subgroup of students does not reflect the entire range of performance within that group. Differences in subgroup performance cannot be ascribed solely to students' subgroup identification. Average student performance is affected by the interaction of a complex set of educational, cultural, and social factors not discussed in this report or addressed by NAEP assessments.

Performance of Selected Subgroups for the Nation

Gender

In recent years, educators and researchers have produced a number of studies documenting gender differences in writing performance. Some of these studies focus on qualitative differences between the writing produced by boys and that produced by girls.[1] Other studies examine quantitative differences in language use and writing performance by gender.[2]

Results from the NAEP writing assessment reflect similar patterns in performance between male and female students.

Figure 3.1 presents national average writing scale scores for male and female students in grades 4, 8, and 12, across assessment years. In 2002, female students outperformed their male peers at all three grades. The average scores of male and female fourth-graders and eighth-graders were higher in 2002 than in 1998; however, at grade 12 the average scores for male students declined, while no change in the average scores for female students was detected during the same interval.

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1 Levine, T., and Geldman-Caspar, Z. (1996). Informal Science Writing Produced by Boys and Girls: Writing Preference and Quality. *British Educational Research Journal 22*(4), 421–439.

Peterson, S. (2001). Gender Identities and Self-Expression in Classroom Narrative Writing. *Language Arts 78*(5), 451–457.

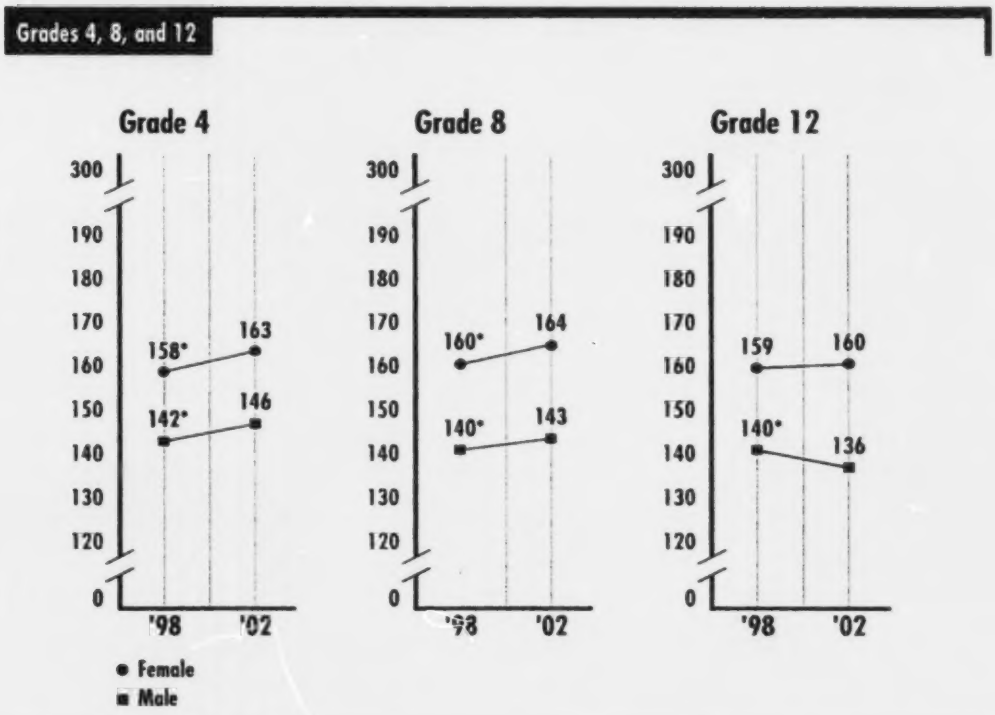
Thomas, P. (1994). Writing, Reading, and Gender. *Gifted Education International, 9*(3), 154–158.

2 Ashmore, R., and Shields, C. (2002). The Achievement Gap: A Comparison of Anglo and Navajo Student Writing Samples. *Planning and Changing, 33*(1), 91–105.

Berninger, V. W., and Fuller, F. (1992). Gender Differences in Orthographic, Verbal and Compositional Fluency: Implications for Assessing Writing Disabilities in Primary Grade Children. *Journal of School Psychology, 30*(4), 363–382.

Hoff Sommers, C. (2000). *The War Against Boys*. New York: Simon and Schuster.

Figure 3.1 Average writing scale scores, by gender, grades 4, 8, and 12: 1998 and 2002

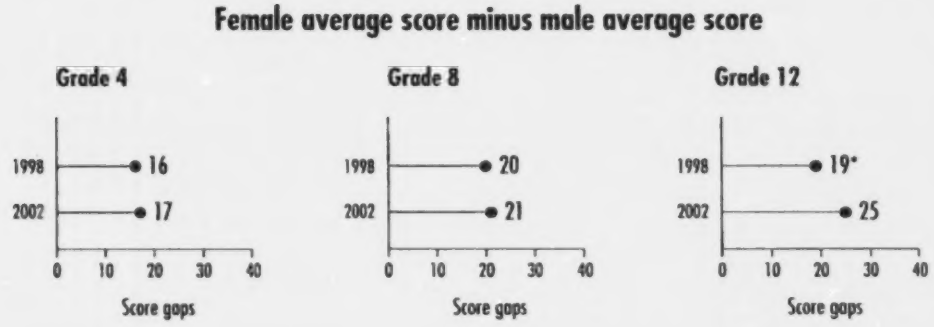


* Significantly different from 2002.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

Another way to compare student performance is to determine whether there is a difference or "gap" between the subgroup average scores and whether that gap increases or decreases between assessment years. The scale score gaps between male and female students are presented in figure 3.2. In 2002, the difference in average writing scale scores favoring females was 17 points at grade 4, 21 points at grade 8, and 25 points at grade 12. Between 1998 and 2002, no significant change was detected in the scale score gap between male and female students at grades 4 and 8; however, a significant increase in the gap between males and females was noted at grade 12.

Figure 3.2 Gaps in average writing scale scores, by gender, grades 4, 8, and 12: 1998 and 2002

Grades 4, 8, and 12



* Significantly different from 2002.
NOTE: Score gaps are calculated based on differences between unrounded average scale scores.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

Table 3.1 displays achievement level information for the national sample of fourth-, eighth-, and twelfth-graders both as the percentages of male and female students within each achievement level range and as the percentages of male and female students at or above the *Basic* and *Proficient* levels. At grade 4, the percentages of male and female students performing at or above *Basic* and at or above *Proficient* were higher in 2002 than in 1998. At grade 8, the percentages of both males and females performing at or above *Proficient* increased since 1998. At grade 12, the percentage of male students performing at or above *Basic* was lower in 2002 than in 1998. While the percentage of female twelfth-graders performing at or above *Proficient* increased since 1998, no change in the percentage of male students performing at or above *Proficient* was observed for the same time period.

Higher percentages of female students performed at or above the *Basic* and *Proficient* levels, and at *Advanced*, than their male peers in all three grades.

Table 3.1 Percentage of students, by writing achievement level and gender, grades 4, 8, and 12: 1998 and 2002

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4							
Male	1998	21 *	63	16 *	1 *	79 *	16 *
	2002	19	61	19	1	81	20
Female	1998	11 *	59 *	28 *	2 *	89 *	30 *
	2002	9	55	33	3	91	36
Grade 8							
Male	1998	22	61 *	17 *	# *	78	17 *
	2002	21	58	20	1	79	21
Female	1998	9	55 *	34 *	2 *	91	36 *
	2002	9	50	38	3	91	42
Grade 12							
Male	1998	30 *	56 *	14	#	70 *	14
	2002	37	49	13	1	63	14
Female	1998	14	58 *	27	1 *	86	29 *
	2002	15	52	30	3	85	33

Percentage rounds to zero.
* Significantly different from 2002.
NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Race/Ethnicity

In recent years, much has been written about apparent differences in academic achievement between students from varying racial/ethnic backgrounds. A number of researchers have documented successful efforts to narrow these achievement discrepancies between subgroups.[3] However, differences at some performance levels and for a number of variables continue to be detected.[4]

Based on information obtained from school records, students who participated in the NAEP 1998 and 2002 writing assessments were identified as belonging to one of the following racial/ethnic subgroups: White, Black, Hispanic, Asian/Pacific Islander, American Indian (including Alaska Native), and Other. The distribution over these six categories is shown in table B.2 in appendix B. The 1998 results presented in this report differ from those in the 1998 writing report card in which results were reported for five racial/ethnic subgroups based on student reports. Table 3.2 and figure 3.3 show the average writing scale scores of students in each of the six categories at grades 4, 8, and 12.

At grades 4 and 8, White, Black, and Hispanic students had higher average writing scores in 2002 than in 1998. Apparent increases for fourth- and eighth-grade Asian/Pacific Islander and American Indian/Alaska Native students were not found to be statistically significant.

At grade 12, no significant changes were detected for any of the racial/ethnic groups from 1998 to 2002.

In 2002, Asian/Pacific Islander students outperformed all other subgroups at grade 4. Both Asian/Pacific Islander students and White students outperformed Black, Hispanic, and American Indian/Alaska Native students at grades 4 and 8. At grade 12, White and Asian/Pacific Islander students scored higher on average than Black and Hispanic students, and Hispanic students had higher scores than Black students.

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[3] Balfanz, R., and MacIver, D. (2000). Transforming High Poverty Urban Middle Schools into Strong Learning Institutions: Lessons From the First Five Years of the Talent Development Middle School. *Journal of Education for Students Placed at Risk, 5*(1 & 2).

Charles A. Dana Center, University of Texas at Austin. (1999). *Hope for Urban Education: A Study of Nine High-Performing, High Poverty Urban Schools.* Washington, DC: U.S. Department of Education [On-line]. Available: http://www.ed.gov/pubs/urbanhope/

Grissmer, D. (1999). Class Size Effects: Assessing the Evidence, Its Policy Implications, and Future Research Agenda. *Educational Evaluation and Policy Analysis, 21*(1), 231–238.

Reyes, P., Scribner, J. D., and Scribner, A. P. (Eds.). (1999). *Lessons from High-Performing Hispanic Schools.* New York, NY: Teachers College Press.

[4] Bankston, C. L., and Caldas, S. J. (1997). The American School Dilemma: Race and Scholastic Performance. *The Sociological Quarterly, 38,* 423–429.

Camara, W., and Schmidt, A. (1999). *Group Differences in Standardized Testing and Social Stratification.* New York, NY: College Entrance Examination Board.

Haycock, K. (2001). Closing the Achievement Gap. *Educational Leadership, 58*(6), 6–11.

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Table 3.2 Average writing scale scores, by race/ethnicity, grades 4, 8, and 12: 1998 and 2002

Grades 4, 8, and 12	1998	2002
Grade 4		
White	156 *	161
Black	130 *	140
Hispanic	134 *	141
Asian/Pacific Islander	159	167
American Indian/Alaska Native	130	139
Other	154	156
Grade 8		
White	157 *	161
Black	131 *	135
Hispanic	131 *	137
Asian/Pacific Islander	154	161
American Indian/Alaska Native	130	137
Other	151	154
Grade 12		
White	155	154
Black	134	130
Hispanic	136	136
Asian/Pacific Islander	150	151
American Indian/Alaska Native	129	***
Other	159	141

* Significantly different from 2002.

*** Quality control activities and special analysis raised concerns about the accuracy and precision of grade 12 American Indian/Alaska Native data in 2002. As a result, they are omitted from this report.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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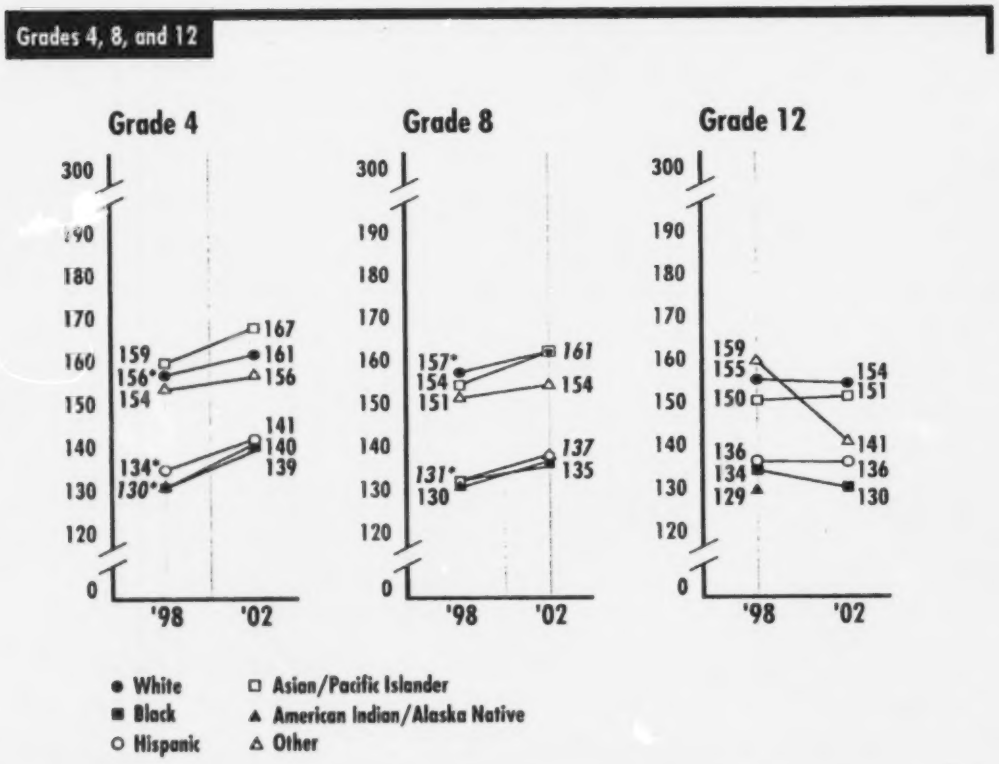
Figure 3.3 Average writing scale scores, by race/ethnicity, grades 4, 8, and 12: 1998 and 2002



* Significantly different from 2002.

NOTE: Italicized scale score values indicate that two or more groups had the same average scale score when rounded:
Grade 4, 1998: Black and American Indian/Alaska Native students (the 1998 score was significantly different from 2002 only for Black students); Grade 8, 1998: Black and Hispanic students (the 1998 scores were significantly different from 2002 for both Black and Hispanic students); Grade 8, 2002: White and Asian/Pacific Islander students, and Hispanic and American Indian/Alaska Native students.
Quality control activities and special analysis raised concerns about the accuracy and precision of grade 12 American Indian/Alaska Native data in 2002. As a result, they are omitted from this report.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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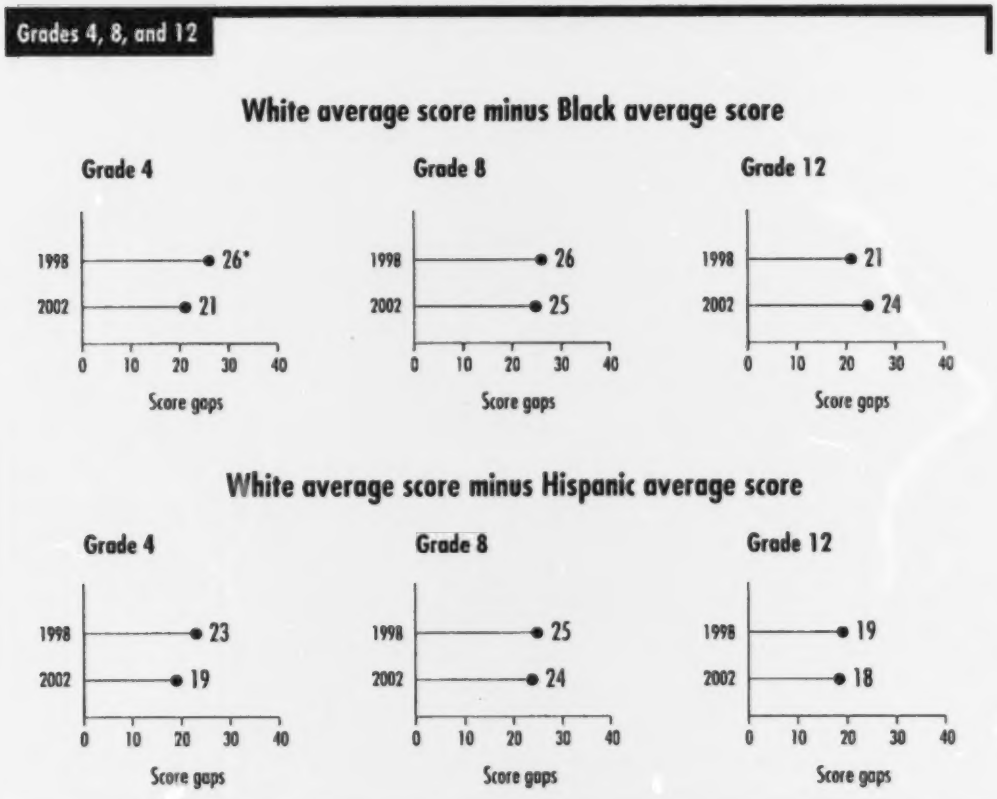
Average scale score gaps between White and Black students and between White and Hispanic students are presented in figure 3.4. In 2002, the score gap between White and Black fourth-grade students was smaller than in 1998. At grades 8 and 12, any apparent changes in the gaps either between White and Black students or between White and Hispanic students from 1998 to 2002 were not found to be statistically significant.

Figure 3.4 Gaps in average writing scale scores, by race/ethnicity, grades 4, 8, and 12: 1998 and 2002



* Significantly different from 2002.

NOTE: Score gaps are calculated based on differences between unrounded average scale scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Achievement level results across assessment years for racial/ethnic subgroups are shown in table 3.3. At grade 4, the percentages of White, Black, Hispanic, and Asian/Pacific Islander students performing at or above *Proficient* were higher in 2002 than in 1998. For the same period, the percentages of White and Black students performing at or above *Basic* were higher. Although still relatively small, the percentages of White and Hispanic fourth-grade students performing at *Advanced* were higher in 2002 than in 1998.

At grade 8, the percentages of White, Black, and Hispanic students performing at or above the *Proficient* level were higher in 2002 than in 1998. Apparent changes in the percentages of students performing at or above *Basic* were not found to be significantly different for any of the racial/ethnic groups. The percentage of White eighth-grade students performing at *Advanced* increased from 1 percent in 1998 to 3 percent in 2002.

At grade 12, the percentage of White students performing at or above *Basic* declined since 1998. The percentage of White twelfth-grade students performing at *Advanced* increased from 1 percent in 1998 to 2 percent in 2002. No significant differences in the percentages of students performing at or above *Proficient* were detected for any racial/ethnic group over the same period.

Comparison of performance of racial/ethnic subgroups in 2002 shows higher percentages of White and Asian/Pacific Islander students than Black and Hispanic students performing at or above *Basic* and at or above *Proficient* at all three grades. In addition, higher percentages of Asian/Pacific Islander students than White students were noted at or above *Basic* and at or above *Proficient* at grade 4.

Table 3.3 Percentage of students, by writing achievement level and race/ethnicity, grades 4, 8, and 12: 1998 and 2002

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4							
White	1998	11 *	61 *	26 *	2 *	89 *	28 *
	2002	10	57	31	3	90	34
Black	1998	32 *	61	7 *	#	68 *	8 *
	2002	23	63	13	1	77	14
Hispanic	1998	29	61	10 *	# *	71	10 *
	2002	23	60	16	1	77	17
Asian/Pacific Islander	1998	9	60	28 *	3	91	31 *
	2002	7	52	37	4	93	41
American Indian/Alaska Native	1998	32	60	8	0	68	8
	2002	25	61	13	1	75	15
Other	1998	12	64	24	#	88	24
	2002	13	58	26	3	87	29
Grade 8							
White	1998	11	57 *	31 *	1 *	89	33 *
	2002	10	52	35	3	90	38
Black	1998	29	63	8 *	#	71	8 *
	2002	26	61	13	#	74	13
Hispanic	1998	30	60	10 *	#	70	10 *
	2002	27	57	16	1	73	16
Asian/Pacific Islander	1998	15	54	30	2	85	32
	2002	12	49	37	4	88	40
American Indian/Alaska Native	1998	32	57	11	#	68	11
	2002	27	57	15	1	73	16
Other	1998	14	57	28	1	86	29
	2002	15	54	30	2	85	31
Grade 12							
White	1998	17 *	57 *	25	1 *	83 *	26
	2002	21	51	25	2	79	28
Black	1998	36	56 *	8	#	64	8
	2002	41	50	8	#	59	9
Hispanic	1998	34	56	10	#	66	10
	2002	36	51	12	1	64	13
Asian/Pacific Islander	1998	24	53	21	1	76	23
	2002	24	50	23	3	76	25
American Indian/Alaska Native	1998	42	47	10	#	58	11
	2002	***	***	***	***	***	***
Other	1998	18	47	34	1	82	35
	2002	33	45	19	3	67	22

Percentage rounds to zero.

* Significantly different from 2002.

*** Quality control activities and special analysis raised concerns about the accuracy and precision of grade [illegible] American Indian/Alaska Native data. As a result, they are omitted from this report.

NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Student Eligibility for Free/ Reduced-Price School Lunch

Funded by the U.S. Department of Agriculture (USDA) as part of the National School Lunch Program, free/reduced-price school lunches are provided to eligible children near or below the poverty line. Eligibility guidelines for the program are based on the federal income poverty guidelines and are stated by household size.[5] NAEP collects data on students' eligibility for free/ reduced-price lunch as an indicator of economic status at both the national and state levels.

In 2002, 40 percent of fourth-graders, 31 percent of eighth-graders, and 19 percent of twelfth-graders were eligible for free/reduced-price lunches. Information regarding eligibility was not available for 13–18 percent of the students.

Table 3.4 and figure 3.5 present the average scale score results at grades 4, 8, and 12, by students' eligibility for free/ reduced-price lunch. Average fourth- and eighth-grade writing scores in 2002 were higher than in 1998 for students who were eligible for free/reduced-price school lunch, as well as for those who were not eligible. At grade 12, no statistically significant changes in scores were detected for students who were eligible and students who were not eligible.

In 2002, the average writing score for students who were eligible for free/ reduced-price lunch was lower than that of students who were not eligible at all three grades.

Table 3.4 Average writing scale scores, by student eligibility for free/reduced-price school lunch, grades 4, 8, and 12: 1998 and 2002

Grades 4, 8, and 12	1998	2002
Grade 4		
Eligible	134 *	141
Not eligible	158 *	163
Information not available	157	161
Grade 8		
Eligible	132 *	136
Not eligible	157 *	162
Information not available	157	161
Grade 12		
Eligible	133	132
Not eligible	152	152
Information not available	155	156

* Significantly different from 2002.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

[5] U.S. General Services Administration. (2001). *Catalog of Federal Domestic Assistance.* Washington, DC: Executive Office of the President, Office of Management and Budget.

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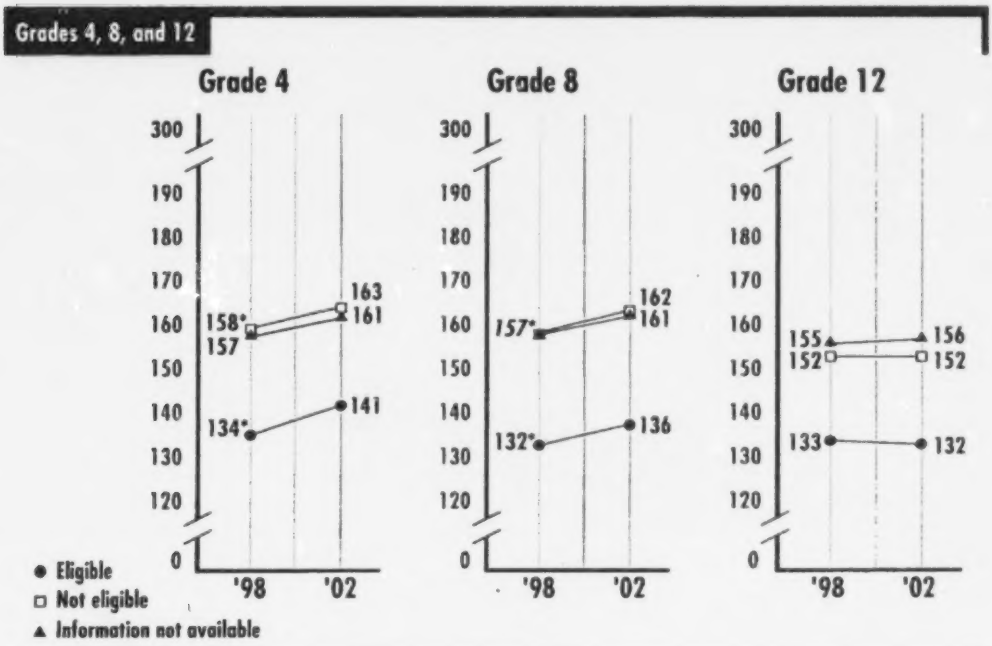
Figure 3.5 Average writing scale scores, by student eligibility for free/reduced-price school lunch, grades 4, 8, and 12: 1998 and 2002



* Significantly different from 2002.

NOTE: Italicized scale score values indicate that two or more groups had the same rounded average score. The average scale scores, when rounded, were the same in 1998 for grade 8 students who were "not eligible" and for whom information was "not available" (the 1998 score was only significantly different from 2002 for the students who were "not eligible").

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

Achievement level results by students' eligibility for free/reduced-price lunch are presented in table 3.5. The percentages of fourth-graders at or above *Basic*, at or above *Proficient*, and at *Advanced* increased between 1998 and 2002 among students who were eligible for free/reduced-price school lunch and among those who were not. At grade 8, the percentages of students at or above *Proficient* and at *Advanced* increased for both students who were eligible and students who were not eligible. At grade 12, the percentage of students at or above *Basic* decreased and the percentage at *Advanced* increased for those twelfth-graders who were not eligible for free/reduced-price lunch.

At all three grades, there were higher percentages of students who were not eligible for free/reduced-price school lunch performing at or above *Basic*, at or above *Proficient*, and at *Advanced* in 2002 than of students who were eligible.

Table 3.5 Percentage of students, by writing achievement level and eligibility for free/reduced-price school lunch, grades 4, 8, and 12: 1998 and 2002

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4							
Eligible	1998	28 *	63	9 *	# *	72 *	9 *
	2002	22	62	15	1	78	15
Not eligible	1998	10 *	60 *	28 *	2 *	90 *	30 *
	2002	8	56	33	3	92	36
Information not available	1998	12	59	28	2	88	30
	2002	10	56	32	3	90	34
Grade 8							
Eligible	1998	29	61 *	10 *	# *	71	10 *
	2002	26	58	15	1	74	16
Not eligible	1998	10	57 *	31 *	1 *	90	33 *
	2002	9	52	36	3	91	39
Information not available	1998	12	54	32	2	88	34
	2002	11	51	35	4	89	39
Grade 12							
Eligible	1998	36	56 *	8	#	64	8
	2002	40	50	10	1	60	11
Not eligible	1998	19 *	57 *	23	1 *	81 *	23
	2002	23	51	24	2	77	26
Information not available	1998	18	57 *	24	1 *	82	26
	2002	19	52	27	2	81	29

Percentage rounds to zero.
* Significantly different from 2002.
NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

The results presented for students within different racial/ethnic subgroups and by eligibility for free/reduced-price lunch are explored in more detail in table 3.6. Average scores of students within the six different racial/ethnic categories are presented for students who were either eligible or not eligible for free/reduced-price lunch, as well as for students for whom eligibility information was not available. By presenting the data in this manner, it is possible to examine the performance of students in different racial/ethnic subgroups, while controlling for one indicator of socioeconomic status—eligibility for free/reduced-price lunch.

In 2002, between 43 and 69 percent of Black and Hispanic students were eligible for free/reduced-price school lunch compared to between 11 and 33 percent of White and Asian/Pacific Islander students (see table B.4 in appendix B). The percentage of students who were eligible in 2002 was higher among Asian/Pacific Islander students than among White students at each grade.

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With a few exceptions, patterns in performance between the different racial/ethnic subgroups were similar among students who were eligible and those who were not eligible for free/reduced-price lunch. At all three grades, White students outperformed their Black and Hispanic peers regardless of whether or not the students were eligible for free/reduced-price lunch. Both eligible and ineligible Asian/Pacific Islander students outperformed all other racial/ethnic subgroups at grade 4 and scored higher on average than Black, Hispanic, and American Indian/Alaska Native students at grade 8. As seen in the overall results by race/ethnicity at grade 12, Asian/Pacific Islander students who were not eligible for free/reduced-price lunch had higher average scores than Black and Hispanic students who were not eligible; however there was no significant difference detected between Asian/Pacific Islander and Hispanic students who were eligible. While twelfth-grade Hispanic students had higher scores than Black students when both were eligible for free/reduced-price lunch, there was no significant difference observed among students who were not eligible.

Table 3.6 Average writing scale scores, by student eligibility for free/reduced-price school lunch and race/ethnicity, grades 4, 8, and 12: 2002

	Eligible	Not eligible	Information not available
Grade 4			
White	147	165	166
Black	136	150	145
Hispanic	137	155	147
Asian/Pacific Islander	155	173	172
American Indian/Alaska Native	132	151	143
Grade 8			
White	144	164	168
Black	129	145	142
Hispanic	131	149	143
Asian/Pacific Islander	144	170	166
American Indian/Alaska Native	127	151	135
Grade 12			
White	139	154	159
Black	123	134	137
Hispanic	130	139	144
Asian/Pacific Islander	134	155	161
American Indian/Alaska Native	‡‡‡	‡‡‡	‡‡‡

‡‡‡ Quality control activities and special analysis raised concerns about the accuracy and precision of grade 12 American Indian/Alaska Native data. As a result, they are omitted from this report.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Title I

Title I is a federally funded program that provides educational services to children who live in areas with high concentrations of low-income families and serves as another indicator of students' economic status. Although NAEP first began collecting data on schools receiving Title I funds in 1996, changes in the program in subsequent years do not allow meaningful comparisons across years. Therefore, only the information collected as part of the 2002 assessment is reported for each grade.

In 2002, 33 percent of fourth-graders, 19 percent of eighth-graders, and 10 percent of twelfth-graders attended schools that reported participating in Title I. The results presented in table 3.7 show that, at all three grades, students who attended schools that participated in Title I had lower average writing scores than students who attended schools that did not participate in Title I.

Table 3.7 Average writing scale scores, by school participation in Title I, grades 4, 8, and 12: 2002

		2002
Grade 4		
	Participated	139
	Did not participate	161
Grade 8		
	Participated	135
	Did not participate	158
Grade 12		
	Participated	132
	Did not participate	150

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Achievement level results by school participation in Title I are presented in table 3.8. The pattern for achievement level results parallels that seen in the scale scores. At all three grades there were higher percentages of students at or above *Basic*, at or above *Proficient*, and at *Advanced* in schools that did not participate in Title I than in schools that did participate.

Table 3.8 Percentage of students, by writing achievement level and school participation in Title I, grades 4, 8, and 12: 2002

	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4						
Participated	24	62	13	1	76	14
Did not participate	9	56	32	3	91	35
Grade 8						
Participated	28	58	14	1	72	14
Did not participate	12	53	33	3	88	35
Grade 12						
Participated	40	50	10	1	60	10
Did not participate	24	51	23	2	76	25

NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Parents' Highest Level of Education

Eighth- and twelfth-grade students who participated in the NAEP 2002 writing assessment were asked to indicate the highest level of education they thought their parents had completed. Five response options—did not finish high school, graduated from high school, some education after high school, graduated from college, or "I don't know"—were offered. The highest level of education reported for either parent was used in the analysis of this question. The question was not posed to fourth-graders because their responses in previous NAEP assessments were highly variable, and a large percentage of them chose the "I don't know" option. Almost half of the eighth- and twelfth-graders who participated in the 2002 writing assessment reported that at least one of their parents had graduated from college, and fewer than one-tenth indicated neither parent had graduated from high school. Nine percent of eighth-graders and 3 percent of twelfth-graders indicated that they didn't know the highest level of education for either parent.

Average eighth- and twelfth-grade writing scale scores for student-reported parental education levels are shown in table 3.9. Because this question was worded differently in 1998 and 2002, cross-year data comparisons are not available. Overall, there is a positive relationship between student-reported parental education and student achievement for both eighth- and twelfth-graders: the higher the parental education level, the higher the average writing score.

Table 3.9 Average writing scale scores, by student-reported parents' highest level of education, grades 8 and 12: 2002

	2002
Grade 8	
Less than high school	136
Graduated high school	144
Some education after high school	156
Graduated college	165
Unknown	132
Grade 12	
Less than high school	129
Graduated high school	139
Some education after high school	149
Graduated college	158
Unknown	114

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Achievement level results by level of parents' education are presented in table 3.10 and also show a positive relationship, with higher percentages of students at or above the *Basic* and *Proficient* levels associated with higher levels of parental education.

Table 3.10 Percentage of students, by writing achievement level and student-reported parents' highest level of education, grades 8 and 12: 2002

	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 8						
Less than high school	26	59	14	#	74	14
Graduated high school	19	61	20	1	81	20
Some education after high school	11	57	30	1	89	31
Graduated college	9	48	39	4	91	43
Unknown	30	58	12	#	70	12
Grade 12						
Less than high school	43	49	8	#	57	8
Graduated high school	32	53	14	1	68	14
Some education after high school	23	55	21	1	77	22
Graduated college	18	50	29	3	82	32
Unknown	59	36	4	#	41	4

Percentage rounds to zero.
NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Type of School

The schools that participate in the NAEP assessment are classified as either public or nonpublic. A further distinction is then made between nonpublic schools that are Catholic schools and those that are some other type of nonpublic school. Results for additional categories of nonpublic schools are available online (http://nces.ed.gov/nationsreportcard/naepdata). The average writing scores of fourth-, eighth-, and twelfth-grade students by the type of school they attend are presented in table 3.11 and figure 3.6.

The average writing scores for fourth- and eighth-grade public-school students were higher in 2002 than in 1998. There was no significant change detected in the average scores for fourth-, eighth-, or twelfth-grade students attending nonpublic schools between 1998 and 2002, nor was there any significant change in scores among twelfth-grade public-school students during the same period.

Performance results in 2002 show that, at all three grades, students who attended nonpublic schools had higher average writing scores than students who attended public schools. At grade 8, students who attended Catholic schools had higher scores than those attending other nonpublic schools.

Table 3.11 Average writing scale scores, by type of school, grades 4, 8, and 12: 1998 and 2002

Grades 4, 8, and 12	1998	2002
Grade 4		
Public	148 *	153
Nonpublic	164	166
Nonpublic: Catholic	163	166
Nonpublic: Other	165	167
Grade 8		
Public	148 *	152
Nonpublic	167	170
Nonpublic: Catholic	169	172
Nonpublic: Other	166	168
Grade 12		
Public	148	146
Nonpublic	165	168
Nonpublic: Catholic	167	***
Nonpublic: Other	159	***

* Significantly different from 2002.
*** Participation rates for Catholic and Other nonpublic school students at grade 12 did not meet the minimum criterion for reporting in 2002.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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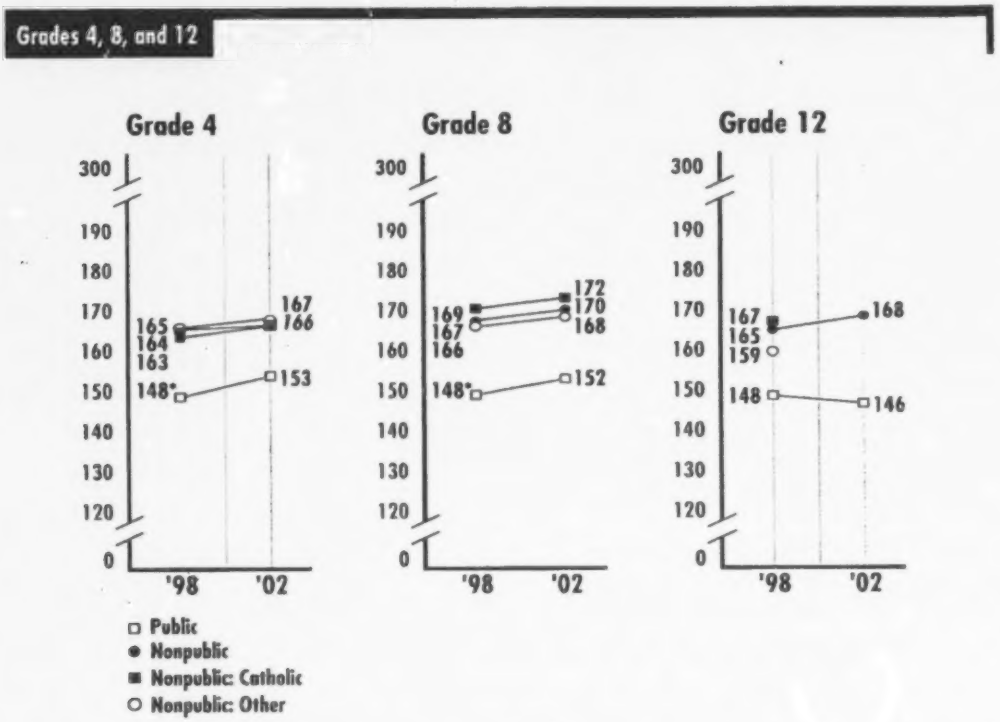
Figure 3.6 Average writing scale scores, by type of school, grades 4, 8, and 12: 1998 and 2002



* Significantly different from 2002.

NOTE: Italicized scale score values indicate that two or more groups had the same rounded average score. The average scale scores, when rounded, were the same for nonpublic- and Catholic-school students at grade 4 in 2002.

Participation rates for Catholic and Other nonpublic school students at grade 12 did not meet the minimum criterion for reporting in 2002.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

Achievement level results by type of school are presented for each of the three grades in table 3.12. The percentages of fourth-grade public-school students performing at or above *Basic*, at or above *Proficient*, and at *Advanced* increased between 1998 and 2002. At grade 8, the percentage of public-school students performing at or above *Proficient* increased, and percentages of public- and nonpublic-school students performing at *Advanced* increased over the same period of time. Changes at the twelfth grade include a decline in the percentage of public-school students performing at or above *Basic* and an increase in the percentage of public- and nonpublic-school students performing at the *Advanced* level.

In 2002, the percentages of students performing at or above *Basic* and at or above *Proficient* were higher at all three grades among nonpublic-school students than public-school students. The percentages of students performing at *Advanced* in grades 8 and 12 were higher for students attending nonpublic schools than for those in public schools. At grade 8, the percentage of Catholic-school students performing at or above *Basic* was higher than that of other nonpublic-school students.

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Table 3.12 Percentage of students, by writing achievement level and type of school, grades 4, 8, and 12: 1998 and 2002

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4							
Public	1998	17 *	61 *	20 *	1 *	83 *	22 *
	2002	15	59	25	2	85	27
Nonpublic	1998	7	58	33	2	93	35
	2002	6	56	36	3	94	39
Nonpublic: Catholic	1998	6	60	33	2	94	34
	2002	5	57	35	2	95	38
Nonpublic: Other	1998	7	55	35	3	93	38
	2002	6	54	37	3	94	40
Grade 8							
Public	1998	17	59 *	23 *	1 *	83	24 *
	2002	16	54	28	2	84	30
Nonpublic	1998	4	52 *	41	3 *	96	44
	2002	5	48	43	4	95	47
Nonpublic: Catholic	1998	3	51	43	2	97	46
	2002	3	48	45	4	97	49
Nonpublic: Other	1998	5	53	39	3	95	42
	2002	6	48	41	4	94	45
Grade 12							
Public	1998	23 *	57 *	19	1 *	77 *	20
	2002	27	51	20	2	73	22
Nonpublic	1998	10	55	33	2 *	90	35
	2002	11	50	36	4	89	40
Nonpublic: Catholic	1998	9	54	35	2	91	37
	2002	•••	•••	•••	•••	•••	•••
Nonpublic: Other	1998	14	56	29	2	86	30
	2002	•••	•••	•••	•••	•••	•••

* Significantly different from 2002.
••• Participation rates for Catholic and Other nonpublic school students at grade 12 did not meet the minimum criterion for reporting.
NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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The results presented for students in public and nonpublic schools and by highest level of parents' education are explored in more detail in table 3.13. Average scores of students in public and nonpublic schools are presented for each level of parental education. By presenting the data in this manner, it is possible to examine the performance of students in the two types of schools, while controlling for parental education.

In 2002, approximately two-thirds of the students attending nonpublic schools reported that at least one parent had graduated from college, compared to close to one-half of the students attending public schools. In contrast, students reporting all other levels of parental education were more likely to attend public than nonpublic schools (see table B.8 in appendix B). With one exception, average writing scores were higher for nonpublic- than public-school students regardless of the reported level of parental education. The apparent difference in scale scores between public- and nonpublic-school twelfth-graders who reported that their parents did not finish high school was not found to be statistically significant.

Table 3.13 Average writing scale scores, by student-reported parents' highest level of education and type of school, grades 8 and 12: 2002

	Less than high school	Graduated high school	Some education after high school	Graduated college	Unknown
Grade 8					
Public	135	144	155	163	131
Nonpublic	154	157	166	176	152
Grade 12					
Public	128	137	148	156	113
Nonpublic	144	157	164	173	***

*** Sample size is insufficient to permit a reliable estimate.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Type of School Location

The schools from which NAEP draws its samples of students are classified according to their type of location. Based on U.S. Census Bureau definitions of metropolitan statistical areas, including population size and density, the three mutually exclusive categories are central city, urban fringe/large town, and rural/small town. The methods used to identify the type of school location for the 2002 assessment were different from those used for prior assessments; therefore, only the data from the 2002 assessment are reported. More information on the definitions of location type is given in appendix A.

The average writing scores for fourth-, eighth-, and twelfth-grade students, by type of location, are presented in table 3.14. Students in urban fringe schools had higher average writing scores than their peers in central city schools and rural schools at all three grades. Fourth- and eighth-grade students in rural schools had higher scores than their peers in central city schools while the reverse was true at grade 12.

Table 3.14 Average writing scale scores, by type of location, grades 4, 8, and 12: 2002

		2002
Grade 4		
	Central city	150
	Urban fringe/large town	159
	Rural/small town	152
Grade 8		
	Central city	147
	Urban fringe/large town	156
	Rural/small town	153
Grade 12		
	Central city	148
	Urban fringe/large town	153
	Rural/small town	143

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Achievement level results by type of school location are presented in table 3.15. In 2002, higher percentages of students from urban fringe/large town schools performed at or above *Basic* and at or above *Proficient* than their peers in central city or rural/small town schools at all three grades.

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Table 3.15 Percentage of students, by writing achievement level and type of location, grades 4, 8, and 12: 2002

	Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4						
Central city	17	60	22	2	83	23
Urban fringe/large town	12	55	30	3	88	33
Rural/small town	14	62	23	1	86	24
Grade 8						
Central city	20	54	24	2	80	26
Urban fringe/large town	12	51	34	3	88	37
Rural/small town	14	56	28	2	86	29
Grade 12						
Central city	26	51	21	2	74	23
Urban fringe/large town	22	51	25	2	78	27
Rural/small town	29	51	19	1	71	20

NOTE: Percentages within each writing achievement level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Performance of Selected Subgroups by State

Results for each jurisdiction that participated in the 2002 assessment at grade 4, and in the 1998 and/or 2002 assessments at grade 8, are presented in this section by gender, race/ethnicity, and eligibility for free/reduced-price school lunch. Additional data for participating jurisdictions by subgroup (e.g., percentages at or above *Basic*, average scale score gaps by gender or race/ethnicity) are available on the NAEP web site (http://nces.ed.gov/nationsreportcard/writing/results2002/stateresults.asp). Since results for each jurisdiction are based on the performance of public-school students only, the results for the nation that appear in the tables along with data for participating jurisdictions are based on public-school students only (unlike the national results presented earlier in the chapter which reflect the performance of public- and nonpublic-school students combined).

Gender

Tables 3.16 and 3.17 present the average writing scores for male and female students in participating jurisdictions at grades 4 and 8 respectively. The average fourth-grade writing scores ranged from 119 to 166 for male students and from 130 to 184 for female students.

At grade 8, average scores were higher in 2002 than in 1998 for both male and female students in 12 jurisdictions, for female students only in 1 jurisdiction, and for male students only in 2 jurisdictions. A decrease in the average score for male students was detected in 1 jurisdiction. In 2002, females had higher average scores than males in all the participating jurisdictions at both grades 4 and 8.

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Table 3.16 Average writing scale scores, by gender, grade 4 public schools: By state, 2002

Grade 4	Male	Female
Nation (Public)	144	162
Alabama	130	151
Arizona	132	148
Arkansas	136	154
California !	136	157
Connecticut	166	184
[illegible]	154	172
Florida	149	168
Georgia	141	158
Hawaii	141	158
Idaho	142	159
Indiana	144	163
Iowa !	144	166
Kansas !	141	156
Kentucky	144	165
Louisiana	137	147
Maine	147	169
Maryland	148	165
Massachusetts	162	178
Michigan	138	156
Minnesota !	147	165
Mississippi	134	149
Missouri	141	160
Montana !	141	157
Nebraska	144	164
Nevada	135	155
New Mexico	134	151
New York !	156	170
North Carolina	151	167
North Dakota !	142	158
Ohio	150	164
Oklahoma	135	150
Oregon	139	158
Pennsylvania	148	164
Rhode Island	150	166
South Carolina	136	154
Tennessee !	140	158
Texas	145	163
Utah	135	156
Vermont	147	169
Virginia	149	165
Washington !	151	166
West Virginia	137	156
Wyoming	142	159
Other Jurisdictions		
District of Columbia	127	143
DDESS [1]	148	163
DoDDS [2]	150	168
Guam	123	141
Virgin Islands	119	130

! Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 3.17 Average writing scale scores, by gender, grade 8 public schools: By state, 1998 and 2002

Grade 8	Male		Female	
	1998	2002	1998	2002
Nation (Public) [1]	138 *	141	158 *	162
Alabama	134	130	153	153
Arizona	134	130	153	153
Arkansas	125 *,**	132	148 *	153
California [†]	133	137	148	152
Colorado	141	—	161	—
Connecticut	156	155	175	174
Delaware	134 *,**	150	156 *,**	168
Florida	130 *,**	141	152 *,**	166
Georgia	138	137	156	158
Hawaii	124	126	148	150
Idaho	—	138	—	165
Indiana	—	138	—	162
Kansas [†]	—	144	—	166
Kentucky	135	138	157	161
Louisiana	126 *,**	133	144 *,**	152
Maine	142	144	168	170
Maryland	136 *,**	147	157 *,**	166
Massachusetts	144 *,**	155	166 *,**	173
Michigan	—	137	—	158
Minnesota [†]	134	—	162	—
Mississippi	125 *,**	132	143 *,**	150
Missouri	130 *,**	140	153 *,**	161
Montana [†]	138	137	162	168
Nebraska	—	145	—	167
Nevada	130 *	125	149	151
New Mexico	131	130	153	152
New York [†]	139	142	154 *,**	162
North Carolina	140 *,**	146	161 *,**	167
North Dakota [†]	—	133	—	161
Ohio	—	150	—	170
Oklahoma	142	139	162	160
Oregon [†]	138	144	161	167
Pennsylvania	—	144	—	165
Rhode Island	139 *,**	143	157	160
South Carolina	130 *,**	137	150 *,**	155
Tennessee [†]	138	137	157	159
Texas	144	141	165	162
Utah	130	131	155	155
Vermont	—	151	—	175
Virginia	144	146	164	167
Washington [†]	136 *,**	146	159 *,**	165
West Virginia	133	132	155	157
Wisconsin [†]	141	—	166	—
Wyoming	133 *,**	140	160	164
Other Jurisdictions				
American Samoa	—	85	—	104
District of Columbia	115	120	136	136
DDESS [2]	152	153	168	174
DoDDS [3]	147 *	150	165 *,**	173
Guam	—	121	—	140
Virgin Islands	114	124	131	133

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.

[†] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

* Significantly different from 2002 when only one jurisdiction or the nation is being examined.

** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.

[1] National results for the 1998 assessment are based on the national sample, not on aggregated state assessment samples.

[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[3] Department of Defense Dependents Schools (Overseas).

NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Tables 3.18 and 3.19 present the percentages of male and female students performing at or above the *Proficient* level for the participating jurisdictions at grades 4 and 8 respectively. In 2002, the percentage of fourth-graders performing at or above *Proficient* ranged from 2 to 39 percent for male students and from 7 to 60 percent for female students.

At grade 8, increases in percentages of males and females performing at or above *Proficient* were detected in 11 jurisdictions. Increases for females only were found in 2 jurisdictions and for males only in 1 jurisdiction. There were higher percentages of female students performing at or above *Proficient* in 2002 than male students in all the participating jurisdictions at grade 4, and in all but two jurisdictions at grade 8.

Table 3.18 Percentage of students at or above *Proficient* in writing, by gender, grade 4 public schools: By state, 2002

Grade 4	Male	Female
Nation (Public)	18	35
Alabama	8	23
Arizona	9	22
Arkansas	10	27
California †	14	32
Connecticut	39	60
Delaware	25	46
Florida	23	43
Georgia	16	30
Hawaii	15	29
Idaho	14	32
Indiana	16	35
Iowa †	14	40
Kansas †	14	28
Kentucky	17	37
Louisiana	11	17
Maine	20	44
Maryland	21	38
Massachusetts	34	54
Michigan	11	28
Minnesota †	18	39
Mississippi	8	18
Missouri	12	31
Montana †	13	30
Nebraska	16	38
Nevada	10	25
New Mexico	11	24
New York †	30	44
North Carolina	25	40
North Dakota †	11	28
Ohio	20	35
Oklahoma	11	22
Oregon	15	30
Pennsylvania	20	37
Rhode Island	22	39
South Carolina	10	25
Tennessee †	14	31
Texas	21	37
Utah	11	29
Vermont	21	42
Virginia	22	37
Washington †	22	39
West Virginia	10	28
Wyoming	15	31
Other Jurisdictions		
District of Columbia	7	15
DDESS [1]	16	34
DoDDS [2]	20	41
Guam	5	14
Virgin Islands	2	7

† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[2] Department of Defense Dependents Schools (Overseas).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 3.19 Percentage of students at or above *Proficient* in writing, by gender, grade 8 public schools: By state, 1998 and 2002

Grade 8	Male		Female	
	1998	2002	1998	2002
Nation (Public) [1]	15 *	20	34 *	40
Alabama	9	11	25	28
Arizona	13	11	29	30
Arkansas	6 *,**	11	21 *	28
California †	15	17	25	30
Colorado	16	—	38	—
Connecticut	33	35	55	55
Delaware	13 *,**	25	32 *,**	45
Florida	11 *,**	20	28 *,**	45
Georgia	15	15	31	34
Hawaii	7	10	23	27
Idaho	—	15	—	43
Indiana	—	15	—	38
Kansas †	—	19	—	45
Kentucky	11	15	30	35
Louisiana	5 *,**	11	17 *,**	26
Maine	20	22	44	49
Maryland	13 *,**	25	33 *,**	43
Massachusetts	20 *,**	32	44 *,**	53
Michigan	—	15	—	35
Minnesota †	11	—	39	—
Mississippi	6	6	16	20
Missouri	9 *,**	16	27 *,**	38
Montana †	14	14	37 *	46
Nebraska	—	20	—	44
Nevada	10	8	24	25
New Mexico	10	10	27	28
New York †	13 *,**	20	28 *,**	40
North Carolina	18 *	24	37 *,**	45
North Dakota †	—	11	—	38
Ohio	—	26	—	49
Oklahoma	14	17	36	37
Oregon †	15 *,**	23	38	45
Pennsylvania	—	22	—	42
Rhode Island	17	21	34	38
South Carolina	7 *,**	11	24 *	29
Tennessee †	15	14	32	35
Texas	19	21	43	41
Utah	12	13	31	34
Vermont	—	28	—	55
Virginia	17	22	39	43
Washington †	15 *,**	24	34 *,**	45
West Virginia	10	11	27	31
Wisconsin †	14	—	43	—
Wyoming	12	16	35	40
Other Jurisdictions				
American Samoa	—	2	—	5
District of Columbia	5	6	17	14
DDESS [2]	31	28	45	54
DoDDS [3]	21	23	41 *,**	51
Guam	—	8	—	18
Virgin Islands	5	2	11	5

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.

† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

* Significantly different from 2002 when only one jurisdiction or the nation is being examined.

** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.

[1] National results for the 1998 assessment are based on the national sample, not on aggregated state assessment samples.

[2] Department of Defense Domestic Dependent Elementary and Secondary Schools. [3] Department of Defense Dependents Schools (Overseas).

NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Race/Ethnicity

The average writing scores for each of the racial/ethnic groups in each participating jurisdiction are presented in table 3.20 for grade 4 and in table 3.21 for grade 8. In 2002, the average fourth-grade writing scores ranged from 146 to 183 for White students, from 131 to 181 for Asian/Pacific Islander students, from 125 and 151 for Black students, and from 122 to 154 for Hispanic students.

At grade 8, average scores increased since 1998 for White students in 15 jurisdictions, for Black students in 9 jurisdictions, for Hispanic students in 4 jurisdictions, and for students classified as Other in 1 jurisdiction. Score increases were observed for 2 or more racial/ethnic subgroups in the following jurisdictions: Arkansas, Delaware, Florida, Louisiana, Maryland, Missouri, North Carolina, South Carolina, Washington, and Department of Defense overseas schools.

Table 3.20 Average writing scale scores, by race/ethnicity, grade 4 public schools: By state, 2002

Grade 4	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native	Other
Nation (Public)	159	139	140	166	138	153
Alabama	146	130	•••	•••	•••	•••
Arizona	149	143	129	•••	121	•••
Arkansas	151	130	139	•••	•••	•••
California [1]	158	138	135	164	•••	•••
Connecticut	182	149	154	179	•••	•••
Delaware	171	150	148	181	•••	•••
Florida	165	144	154	•••	•••	•••
Georgia	157	138	136	171	•••	•••
Hawaii	152	147	145	148	•••	151
Idaho	152	•••	138	•••	•••	•••
Indiana	157	138	144	•••	•••	•••
Iowa [1]	156	146	139	•••	•••	•••
Kansas [1]	152	134	137	•••	•••	•••
Kentucky	156	143	•••	•••	•••	•••
Louisiana	151	133	•••	•••	•••	•••
Maine	158	•••	•••	•••	•••	•••
Maryland	165	144	149	170	•••	•••
Massachusetts	175	151	142	168	•••	•••
Michigan	152	131	139	•••	•••	•••
Minnesota [1]	159	136	129	153	143	•••
Mississippi	151	132	•••	•••	•••	•••
Missouri	153	138	•••	•••	•••	•••
Montana [1]	151	•••	•••	•••	133	•••
Nebraska	158	139	137	•••	•••	•••
Nevada	152	133	135	159	133	•••
New Mexico	151	•••	139	•••	126	•••
New York [1]	172	148	149	176	•••	•••
North Carolina	167	147	145	161	•••	161
North Dakota [1]	152	•••	•••	•••	137	•••
Ohio	162	140	•••	•••	•••	•••
Oklahoma	148	128	130	•••	137	147
Oregon	151	139	132	165	•••	•••
Pennsylvania	161	135	136	•••	•••	•••
Rhode Island	164	141	136	150	•••	•••
South Carolina	153	135	•••	•••	•••	•••
Tennessee [1]	153	135	139	•••	•••	•••
Texas	168	142	145	176	•••	•••
Utah	148	•••	126	143	•••	•••
Vermont	158	•••	•••	•••	•••	•••
Virginia	163	140	145	168	•••	•••
Washington [1]	160	145	138	164	•••	•••
West Virginia	147	146	•••	•••	•••	•••
Wyoming	151	•••	144	•••	142	•••
Other Jurisdictions						
District of Columbia	183	132	137	•••	•••	•••
DDESS [1]	160	151	150	•••	•••	154
DoDDS [2]	163	150	152	163	•••	159
Guam	•••	•••	•••	131	•••	•••
Virgin Islands	•••	125	122	•••	•••	•••

[1] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

••• Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[2] Department of Defense Dependents Schools (Overseas).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 3.21 Average writing scale scores, by race/ethnicity, grade 8 public schools: By state, 1998 and 2002

Grade 8	White		Black		Hispanic		Asian/ Pacific Islander		American Indian/ Alaska Native		Other	
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
Nation (Public) [1]	155 *	159	130 *	134	130 *	135	152	159	130	138	143	150
Alabama	150	150	129	127	***	***	***	***	***	***	***	***
Arizona	153	150	123	137	127	126	***	***	130	126	***	***
Arkansas	142 *	147	119 *	125	***	130	***	***	***	***	***	***
California ‡	154	156	134	128	123 *,**	132	157	155	***	***	***	***
Colorado	157	—	133	—	130	—	159	—	***	—	***	—
Connecticut	172	175	138	134	137	136	***	172	***	***	***	***
Delaware	151 *,**	165	130 *,**	145	132 *	144	***	182	***	***	***	***
Florida	150 *,**	163	126 *,**	137	136 *	144	***	167	***	***	***	***
Georgia	156	156	132	138	***	119	***	152	***	***	***	***
Hawaii	142	142	***	139	***	***	135	137	***	***	131	136
Idaho	—	153	—	***	—	130	—	***	—	***	—	***
Indiana	—	153	—	125	—	***	—	***	—	***	—	***
Kansas ‡	—	159	—	135	—	132	—	***	—	***	—	***
Kentucky	148	150	129	137	***	***	***	***	***	***	***	***
Louisiana	145 *,**	153	122 *	129	***	***	***	***	***	***	***	***
Maine	155	157	***	***	***	***	***	***	***	***	***	***
Maryland	156 *,**	167	130 *,**	140	138	143	164	172	***	***	***	***
Massachusetts	160 *,**	171	134	139	122	132	159	167	***	***	***	***
Michigan	—	152	—	130	—	***	—	***	—	***	—	***
Minnesota ‡	151	—	118	—	***	—	131	—	***	—	***	—
Mississippi	145	149	123 *,**	132	***	***	***	***	***	***	***	***
Missouri	145 *,**	153	124 *,**	139	***	***	***	***	***	***	***	***
Montana ‡	152	155	***	***	***	***	***	***	132	129	***	***
Nebraska	—	160	—	131	—	128	—	***	—	***	—	***
Nevada	145	143	132	128	123	123	144	149	***	***	***	***
New Mexico	152	152	150	***	133	134	***	***	132	131	***	***
New York ‡	156 *,**	163	131	134	125	133	148	155	***	***	***	***
North Carolina	158 *,**	165	134 *,**	141	***	132	***	***	141	***	***	***
North Dakota ‡	—	148	—	***	—	***	—	***	—	125	—	***
Ohio	—	165	—	133	—	***	—	***	—	***	—	***
Oklahoma	155	154	134	135	139	135	***	***	143	144	***	***
Oregon ‡	151 *	157	***	***	133	133	157	162	***	***	***	***
Pennsylvania	—	160	—	124	—	133	—	154	—	***	—	***
Rhode Island	152 *,**	158	133	133	120	128	143	***	***	***	***	***
South Carolina	149 *,**	155	126 *,**	135	***	***	***	***	***	***	***	***
Tennessee ‡	153	152	130	132	***	***	***	***	***	***	***	***
Texas	163	168	146	140	143	137	159	156	***	***	***	***
Utah	145	146	***	***	118	119	136	139	***	***	***	***
Vermont	—	163	—	***	—	***	—	***	—	***	—	***
Virginia	158	162	140	140	151	146	162	171	***	***	***	***
Washington ‡	151 *	158	131	142	118 *,**	137	150	156	***	***	***	***
West Virginia	144	145	142	136	***	***	***	***	***	***	***	***
Wisconsin ‡	155	—	140	—	138	—	***	—	***	—	***	—
Wyoming	147 *,**	153	***	***	136	138	***	***	120	134	***	***
Other Jurisdictions												
American Samoa	—	***	—	***	—	***	—	94	—	***	—	***
District of Columbia	170	***	124	126	128	130	***	***	***	***	***	***
DDESS [2]	167	171	151	154	153	160	***	***	***	***	***	168
DoDDS [3]	160 *	166	147	149	154	155	153	161	***	***	155 *,**	163
Guam	—	***	—	***	—	***	—	130	—	***	—	***
Virgin Islands	***	***	124	128	119	128	***	***	***	***	***	***

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.

‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

* Significantly different from 2002 when only one jurisdiction or the nation is being examined.

** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.

*** Sample size is insufficient to permit a reliable estimate.

[1] National results for the 1998 assessment are based on the national sample, not an aggregated state assessment samples.

[2] Department of Defense Domestic Dependent Elementary and Secondary Schools. [3] Department of Defense Dependents Schools (Overseas).

NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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The percentages of students in the different racial/ethnic subgroups across jurisdictions who performed at or above *Proficient* are presented in tables 3.22 (grade 4) and 3.23 (grade 8). In 2002, the percentage of fourth-graders performing at or above *Proficient* ranged from 19 to 64 percent for White students, from 5 to 22 percent for Black students, from 3 to 30 percent for Hispanic students, and from 9 to 56 percent for Asian/Pacific Islander students. The percentages of eighth-graders performing at or above *Proficient* increased since 1998 for White students in 13 jurisdictions, for Black students in 7 jurisdictions, and for Hispanic students in 1 jurisdiction.

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Table 3.22 Percentage of students at or above *Proficient* in writing, by race/ethnicity, grade 4 public schools: By state, 2002

Grade 4	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native	Other
Nation (Public)	32	14	17	40	15	26
Alabama	20	7	•••	•••	•••	•••
Arizona	21	15	8	•••	4	•••
Arkansas	23	9	11	•••	•••	•••
California †	32	14	14	38	•••	•••
Connecticut	58	22	26	55	•••	•••
Delaware	44	21	20	56	•••	•••
Florida	39	20	30	•••	•••	•••
Georgia	30	13	13	42	•••	•••
Hawaii	24	21	18	22	•••	23
Idaho	24	•••	10	•••	•••	•••
Indiana	28	12	17	•••	•••	•••
Iowa †	28	21	13	•••	•••	•••
Kansas †	24	9	11	•••	•••	•••
Kentucky	29	16	•••	•••	•••	•••
Louisiana	21	7	•••	•••	•••	•••
Maine	32	•••	•••	•••	•••	•••
Maryland	39	17	20	44	•••	•••
Massachusetts	50	21	14	43	•••	•••
Michigan	23	8	11	•••	•••	•••
Minnesota †	31	12	8	25	20	•••
Mississippi	20	6	•••	•••	•••	•••
Missouri	24	11	•••	•••	•••	•••
Montana †	24	•••	•••	•••	8	•••
Nebraska	30	16	10	•••	•••	•••
Nevada	22	9	10	32	11	•••
New Mexico	25	•••	15	•••	6	•••
New York †	47	21	23	52	•••	•••
North Carolina	40	20	20	40	•••	29
North Dakota †	21	•••	•••	•••	10	•••
Ohio	33	11	•••	•••	•••	•••
Oklahoma	20	9	7	•••	11	14
Oregon	24	14	9	39	•••	•••
Pennsylvania	33	9	9	•••	•••	•••
Rhode Island	37	13	9	22	•••	•••
South Carolina	23	9	•••	•••	•••	•••
Tennessee †	26	12	14	•••	•••	•••
Texas	42	17	20	49	•••	•••
Utah	21	•••	6	15	•••	•••
Vermont	32	•••	•••	•••	•••	•••
Virginia	36	12	18	42	•••	•••
Washington †	33	19	12	32	•••	•••
West Virginia	19	18	•••	•••	•••	•••
Wyoming	24	•••	16	•••	19	•••
Other Jurisdictions						
District of Columbia	64	8	10	•••	•••	•••
DDESS [1]	30	18	20	•••	•••	26
DoDDS [2]	34	20	24	34	•••	31
Guam	•••	•••	•••	9	•••	•••
Virgin Islands	•••	5	3	•••	•••	•••

† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

••• Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[2] Department of Defense Dependents Schools (Overseas).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 3.23 Percentage of students at or above *Proficient* in writing, by race/ethnicity, grade 8 public schools: By state, 1998 and 2002

Grade 8	White		Black		Hispanic		Asian/ Pacific Islander		American Indian/ Alaska Native		Other	
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
Nation (Public) [1]	31 *	37	7 *	13	9 *	15	30	39	11	17	20	28
Alabama	22	26	6	9	***	***	***	***	***	***	***	***
Arizona	28	27	6	13	7	9	***	***	12	8	***	***
Arkansas	16 *	22	4	8	***	12	***	***	***	***	***	***
California ‡	30	34	11	10	7	13	35	36	***	***	***	***
Colorado	32	—	10	—	9	—	34	—	***	—	***	—
Connecticut	52	55	14	15	13	17	***	55	***	***	***	***
Delaware	28 *,**	43	9 *,**	18	12	20	***	63	***	***	***	***
Florida	26 *,**	41	7 *,**	17	15 *	26	***	47	***	***	***	***
Georgia	31	33	9	14	***	7	***	27	***	***	***	***
Hawaii	20	21	***	17	***	***	15	18	***	***	11	18
Idaho	—	30	—	***	—	11	—	***	—	***	—	***
Indiana	—	29	—	7	—	***	—	***	—	***	—	***
Kansas ‡	—	36	—	13	—	13	—	***	—	***	—	***
Kentucky	22	26	8	12	***	***	***	***	***	***	***	***
Louisiana	17 *,**	26	4 *,**	8	***	***	***	***	***	***	***	***
Maine	32	36	***	***	***	***	***	***	***	***	***	***
Maryland	31 *,**	45	7 *,**	17	12	24	40	55	***	***	***	***
Massachusetts	36 *,**	49	9	18	6	10	36	45	***	***	***	***
Michigan	—	29	—	9	—	***	—	***	—	***	—	***
Minnesota ‡	27	—	8	—	***	—	11	—	***	—	***	—
Mississippi	17	20	4	6	***	***	***	***	***	***	***	***
Missouri	20 *,**	29	4 *	13	***	***	***	***	***	***	***	***
Montana ‡	26	32	***	***	***	***	***	***	14	10	***	***
Nebraska	—	35	—	10	—	11	—	***	—	***	—	***
Nevada	21	19	10	8	7	7	18	28	***	***	***	***
New Mexico	27	29	29	***	11	13	***	***	12	9	***	***
New York ‡	29 *,**	41	7	12	5	12	27	34	***	***	***	***
North Carolina	35 *	43	11 *,**	18	***	16	***	***	18	***	***	***
North Dakota ‡	—	25	—	***	—	***	—	***	—	7	—	***
Ohio	—	42	—	14	—	***	—	***	—	***	—	***
Oklahoma	29	31	7	13	13	13	***	***	16	22	***	***
Oregon ‡	28 *	35	***	***	13	17	35	41	***	***	***	***
Pennsylvania	—	37	—	7	—	9	—	31	—	***	—	***
Rhode Island	29 *,**	35	10	10	5	9	19	***	***	***	***	***
South Carolina	22 *,**	28	5 *	9	***	***	***	***	***	***	***	***
Tennessee ‡	28	27	9	12	***	***	***	***	***	***	***	***
Texas	40	47	20	20	20	17	35	30	***	***	***	***
Utah	23	25	***	***	5	10	16	17	***	***	***	***
Vermont	—	42	—	***	—	***	—	***	—	***	—	***
Virginia	33	39	12	14	21	20	40	46	***	***	***	***
Washington ‡	27 *,**	37	11	19	7	16	27	35	***	***	***	***
West Virginia	18	21	16	13	***	***	***	***	***	***	***	***
Wisconsin ‡	30	—	16	—	13	—	***	—	***	—	***	—
Wyoming	24	30	***	***	14	12	***	***	8	13	***	***
Other Jurisdictions												
American Samoa	—	***	—	***	—	***	—	3	—	***	—	***
District of Columbia	53	***	9	8	10	11	***	***	***	***	***	***
DDESS [2]	47	51	27	27	32	38	***	***	***	***	***	45
DoDDS [3]	37	43	22	25	28	28	30	35	***	***	29	38
Guam	—	***	—	***	—	***	—	13	—	***	—	***
Virgin Islands	***	***	8	4	7	2	***	***	***	***	***	***

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdiction or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
*** Sample size is insufficient to permit a reliable estimate.
1 National results for the 1998 assessment are based on the national sample, not on aggregated state assessment samples.
2 Department of Defense Domestic Dependent Elementary and Secondary Schools. 3 Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Student Eligibility for Free/ Reduced-Price School Lunch

Tables 3.24 (grade 4) and 3.25 (grade 8) present the average writing score results for participating jurisdictions by students' eligibility for free/reduced-price school lunch. Table 3.25 also presents the results of the 1998 assessment. In 2002, students who were not eligible for free/reduced-price lunch scored higher on average than students who were eligible in all but one jurisdiction at grade 4 and all but three jurisdictions at grade 8. The average fourth-grade writing score ranged from 125 to 154 among students who were eligible and from 141 to 181 among students who were not eligible.

At grade 8 average scores increased since 1998 among both those students who were eligible for free/reduced-price lunch and those who were not eligible in 11 jurisdictions, only among students who were eligible in 1 jurisdiction, and only among students who were not eligible in 4 jurisdictions. A decrease in the average score for eligible students was detected in 1 jurisdiction.

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Table 3.24 Average writing scale scores, by student eligibility for free/reduced-price school lunch, grade 4 public schools: By state, 2002

Grade 4	Eligible	Not eligible	Information not available
Nation (Public)	141	163	155
Alabama	130	152	150
Arizona	129	151	147
Arkansas	137	156	146
California [1]	134	162	147
Connecticut	154	181	186
Delaware	149	171	173
Florida	149	169	***
Georgia	138	160	139
Hawaii	139	158	***
Idaho	140	157	161
Indiana	141	160	167
Iowa [1]	142	160	***
Kansas [1]	137	158	***
Kentucky	144	165	135
Louisiana	135	156	143
Maine	142	165	167
Maryland	145	164	165
Massachusetts	151	177	174
Michigan	134	157	141
Minnesota [1]	147	161	153
Mississippi	135	157	141
Missouri	139	158	159
Montana [1]	139	157	141
Nebraska	143	162	***
Nevada	136	151	146
New Mexico	136	157	136
New York [1]	150	172	175
North Carolina	146	172	159
North Dakota [1]	142	154	***
Ohio	143	164	158
Oklahoma	136	152	133
Oregon	138	158	146
Pennsylvania	137	166	162
Rhode Island	141	169	151
South Carolina	136	155	158
Tennessee [1]	139	158	146
Texas	147	164	160
Utah	136	150	142
Vermont	143	163	170
Virginia	140	165	164
Washington [1]	143	165	160
West Virginia	140	155	144
Wyoming	144	155	153
Other Jurisdictions			
District of Columbia	131	150	***
DDESS [1]	151	162	153
DoDDS [2]	154	161	159
Guam	125	141	***
Virgin Islands	125	***	***

[1] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

*** Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[2] Department of Defense Dependents Schools (Overseas).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 3.25 Average writing scale scores, by student eligibility for free/reduced-price school lunch, grade 8 public schools: By state, 1998 and 2002

Grade 8	Eligible		Not eligible		Information not available	
	1998	2002	1998	2002	1998	2002
Nation (Public) [1]	131 *	136	156 *	161	150	154
Alabama	131	129	153	151	***	150
Arizona	129	126	152	150	145	144
Arkansas	122 *,**	131	145 *,**	150	138	***
California [2] †	121 *,**	132	155	158	148	145
Colorado	132	—	158	—	151	—
Connecticut	139	143	172	174	166	172
Delaware	127 *,**	142	152 *,**	167	142	***
Florida	129 *,**	141	152 *,**	163	141	162
Georgia	130	134	155	156	157	152
Hawaii	123	126	142 *,**	146	144	***
Idaho	—	140	—	156	—	154
Indiana	—	138	—	155	—	144
Kansas †	—	140	—	160	—	170
Kentucky	133	138	155	158	137	147
Louisiana	127 *	133	145 *,**	155	135	141
Maine	139	141	160	163	165	153
Maryland	127 *,**	139	155 *,**	164	152	***
Massachusetts	131 *,**	141	162 *,**	173	153	161
Michigan	—	137	—	154	—	139
Minnesota †	127	—	154	—	154	—
Mississippi	124 *,**	134	144 *,**	152	141	143
Missouri	127 *,**	137	148 *,**	157	133	150
Montana †	138	135	155	159	146	***
Nebraska	—	141	—	163	—	***
Nevada	124	121	146	144	141	143
New Mexico	130	131	150	153	148	145
New York †	131	134	156 *,**	165	151 *,**	136
North Carolina	132 *,**	142	160 *	166	151	164
North Dakota †	—	134	—	151	—	***
Ohio	—	144	—	167	—	155
Oklahoma	142 *	137	158	159	150	164
Oregon †	133	135	155	162	148	160
Pennsylvania	—	131	—	165	—	***
Rhode Island	131	136	155 *,**	161	***	139
South Carolina	126 *,**	134	149 *,**	157	147	146
Tennessee †	135	131	154	160	***	146
Texas	141	137	163	166	150	155
Utah	130	125	146	150	147	141
Vermont	—	144	—	168	—	***
Virginia	136	140	159	162	153	166
Washington †	128 *,**	141	154 *,**	161	151	153
West Virginia	132	134	152	153	141	***
Wisconsin †	141	—	157	—	146	—
Wyoming	136	140	149 *,**	157	***	151
Other Jurisdictions						
American Samoa	—	95	—	***	—	***
District of Columbia	120	123	141	140	130	***
DDESS [3]	157	155	162	165	***	172
DoDDS [4]	156	159	155	163	156	161
Guam	—	115	—	137	—	***
Virgin Islands	123	128	***	***	125	***

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdiction or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
*** Sample size is insufficient to permit a reliable estimate.
[1] National results for the 1998 assessment are based on the national sample, not on aggregated state assessment samples.
[2] Results by students' eligibility for free/reduced-price lunch in California do not include Los Angeles.
[3] Department of Defense Domestic Dependent Elementary and Secondary Schools. [4] Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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The percentage of students performing at or above the *Proficient* level by students' eligibility for free/reduced-price school lunch is presented for participating jurisdictions in tables 3.26 and 3.27 for grades 4 and 8 respectively. Table 3.27 also presents results for grade 8 in 1998. In 2002, the percentage of fourth-graders performing at or above *Proficient* ranged from 4 to 27 percent for students who were eligible and between 15 and 57 percent for students who were not eligible.

The percentage of eighth-graders performing at or above *Proficient* increased since 1998 for both students who were eligible and students who were not eligible in 10 jurisdictions, for only eligible students in 2 jurisdictions, and for only students who were not eligible in 5 jurisdictions.

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Table 3.26 Percentage of students at or above *Proficient* in writing, by eligibility for free/reduced-price school lunch, grade 4 public schools: By state, 2002

Grade 4	Eligible	Not eligible	Information not available
Nation (Public)	15	36	29
Alabama	7	26	23
Arizona	7	23	21
Arkansas	12	27	23
California ‡	12	36	21
Connecticut	27	57	64
Delaware	20	45	51
Florida	24	44	***
Georgia	14	33	11
Hawaii	15	29	***
Idaho	13	29	32
Indiana	14	31	39
Iowa ‡	14	32	***
Kansas ‡	11	29	***
Kentucky	17	38	10
Louisiana	9	25	12
Maine	18	38	40
Maryland	18	37	39
Massachusetts	22	52	49
Michigan	8	28	12
Minnesota ‡	22	33	26
Mississippi	8	26	11
Missouri	11	29	34
Montana ‡	14	27	12
Nebraska	17	34	***
Nevada	11	22	19
New Mexico	12	30	14
New York ‡	23	47	52
North Carolina	20	45	31
North Dakota ‡	14	22	***
Ohio	14	35	27
Oklahoma	11	23	17
Oregon	13	31	18
Pennsylvania	10	38	33
Rhode Island	14	42	23
South Carolina	10	26	26
Tennessee ‡	14	31	17
Texas	22	38	34
Utah	13	23	14
Vermont	16	37	45
Virginia	12	38	41
Washington ‡	16	37	34
West Virginia	12	27	17
Wyoming	18	26	27
Other Jurisdictions			
District of Columbia	7	27	***
DDESS [1]	18	33	24
DoDDS [2]	26	33	30
Guam	6	15	***
Virgin Islands	4	***	***

‡ Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.

*** Sample size is insufficient to permit a reliable estimate.

[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[2] Department of Defense Dependents Schools (Overseas).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table 3.27 Percentage of students at or above *Proficient* in writing, by eligibility for free/reduced-price school lunch, grade 8 public schools: By state, 1998 and 2002

Grade 8	Eligible		Not eligible		Information not available	
	1998	2002	1998	2002	1998	2002
Nation (Public) [1]	10 *	15	32 *	38	27	32
Alabama	6	9	25	27	‡	29
Arizona	9	9	28	26	22	24
Arkansas	5 *,**	11	18 *	25	16	‡
California [2] †	6 *	14	30	35	24	22
Colorado	11	—	32	—	30	—
Connecticut	15	24	51	54	47	52
Delaware	10 *,**	17	28 *,**	43	21	‡
Florida	9 *,**	21	27 *,**	42	18	39
Georgia	8	13	29	33	34	29
Hawaii	8	10	19 *	24	18	‡
Idaho	—	19	—	33	—	32
Indiana	—	16	—	31	—	22
Kansas †	—	17	—	38	—	48
Kentucky	11	15	28	33	14	21
Louisiana	5 *,**	11	18 *,**	29	14	18
Maine	15	21	38	42	43	29
Maryland	6 *,**	16	30 *,**	42	26	‡
Massachusetts	8 *,**	20	39 *,**	52	31	30
Michigan	—	16	—	30	—	20
Minnesota †	10	—	29	—	27	—
Mississippi	4	7	18	23	14	14
Missouri	7 *	12	22 *,**	33	12	23
Montana †	15	14	30	36	18	‡
Nebraska	—	18	—	39	—	‡
Nevada	7	7	21	19	15	23
New Mexico	9	12	26	28	23	22
New York †	8	13	29 *,**	42	25	17
North Carolina	11 *,**	19	36 *	44	27	41
North Dakota †	—	15	—	27	—	‡
Ohio	—	23	—	44	—	30
Oklahoma	15	15	31	35	24	44
Oregon †	13	17	32	39	26	37
Pennsylvania	—	12	—	41	—	‡
Rhode Island	10	13	31 *,**	39	‡	18
South Carolina	5 *	10	22 *,**	30	21	18
Tennessee †	12	12	30	34	‡	20
Texas	17	16	40	45	26	34
Utah	13	11	23 *,**	28	27	21
Vermont	—	25	—	46	—	‡
Virginia	9 *	16	33	38	29	45
Washington †	10 *,**	21	29 *	39	26	33
West Virginia	9	12	25	29	19	‡
Wisconsin †	16	—	33	—	19	—
Wyoming	16	18	26 *	33	‡	23
Other Jurisdictions						
American Samoa	—	3	—	‡	—	‡
District of Columbia	7	6	22	17	13	‡
DDESS [3]	35	31	40	44	‡	49
DoDDS [4]	32	36	30	40	32	36
Guam	—	6	—	16	—	‡
Virgin Islands	9	4	‡	‡	8	‡

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† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002. * Significantly different from 2002 when only one jurisdiction or the nation is being examined.

** Significantly different from 2002 when using a multiple comparison procedure based on all jurisdictions that participated both years.

‡ Sample size is insufficient to permit a reliable estimate.

[1] National results for the 1998 assessment are based on the national sample, not on aggregated state assessment samples.

[2] Results by students' eligibility for free/reduced-price lunch do not include Los Angeles.

[3] Department of Defense Domestic Dependent Elementary and Secondary Schools. [4] Department of Defense Dependents Schools (Overseas).

NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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4 Sample Assessment Tasks and Student Responses

To give readers some familiarity with what students are asked to do on the NAEP writing assessment and how their writing is evaluated, this chapter presents sample writing tasks and student responses from the NAEP 2002 writing assessment ("tasks" are the topics students are given to write about). Sample tasks for all three writing purposes specified by the NAEP writing framework—narrative, informative, and persuasive—are given for grades 4, 8, and 12. The nine tasks discussed in the report have been released from the writing assessment so they can be shared with the public in this and other NAEP reports. NAEP does not release the whole writing assessment for any given assessment year because a sufficient number of writing tasks must be retained for use in future assessments; re-using tasks used in previous assessment years enables NAEP to measure trends in writing achievement over time.

Sample responses to the nine tasks are accompanied by both a summary of the scoring criteria used to determine their rating and their actual assigned ratings on the six-level scoring rubric—"Excellent," "Skillful," "Sufficient," "Uneven," "Insufficient," or "Unsatisfactory." The sample responses in this chapter represent "Uneven" and higher levels of writing. Additional tasks and responses as well as student performance data from previous NAEP writing assessments may be viewed on the NAEP web site at http://nces.ed.gov/nationsreportcard/itmrls/.

To indicate how difficult the sample tasks were for students, each task in this chapter is accompanied by a table presenting two types of performance data: the overall percentages of students whose responses were scored "Uneven or better," "Skillful or better," and "Excellent," and the percentages of students who scored within specific score ranges on the NAEP writing scale. The score ranges correspond to the three achievement level intervals—*Basic*, *Proficient*, and *Advanced*—as well as the range below *Basic*.

All students who took the assessment were given brochures that provided suggestions for planning and reviewing their writing; the writing brochures for grades 4, 8, and 12 are reprinted in this chapter, following the presentation of student responses.

This chapter concludes with item maps that show where sample responses at different levels fall on the NAEP writing scale. For each writing task discussed in this report, the item maps display the points on the writing scale at which students are considered to have the skill to write a response of the indicated quality.

Narrative, Informative, and Persuasive Writing

In specifying that students must write narratives, informative essays, and persuasive pieces, the NAEP writing framework ensures that students taking the assessment will have the opportunity to develop and organize ideas, use language effectively, and demonstrate awareness of audience for a range of writing purposes. This section describes what students at grades 4, 8, and 12 were able to accomplish when writing for all three purposes.

Narrative Writing: Weaving a Story

How do writers tell a story? The storyteller weaves plot, character, language, and detail into a whole to create a narrative. To engage students in creating narratives for the NAEP writing assessment, students across grades 4, 8, and 12 were presented with a range of tasks and kinds of stimuli, including drawings, cartoons, photographs, and, at grades 8 and 12, newspaper articles and quotations.

Narrative tasks like *Unusual Day* (released in this report) presented fourth-grade students with imaginative drawings, much like those from a children's book. At grades 8 and 12, students were asked to write both first- and third-person narratives. The *President for a Day* task released in this report is an example of an eighth-grade first-person narrative. Twelfth-graders were sometimes asked to assume the voice of a character or to write in a particular genre. The twelfth-grade task featured in this report asked students to write a genre narrative, *Tall Tale*.

Student responses were scored for overall quality, with six-level scoring rubrics that used the following categories: "Excellent," "Skillful," "Sufficient," "Uneven," "Insufficient," and "Unsatisfactory." Within a grade, the same narrative scoring guide was used to score all narrative responses regardless of task, although raters were also made aware of the variety of responses characteristic of any given task.

Expectations for student writing increased with increasing grade level. For example, it was anticipated that students at grades 8 and 12 would write more controlled and lengthier pieces characterized by more complex sentences and more sophisticated word choices. Further, eighth- and twelfth-grade students usually provided substantially more developed narrative plots than did fourth-graders. In "Skillful" or "Excellent" responses, students at grades 8 and 12 were generally more able at using narrative techniques to interweave event and characterization and to experiment with precise language that increased the effectiveness of their stories.

However, it is accurate to say that across grades 4, 8, and 12, narrative responses rated "Skillful" or "Excellent" were clearly developed with details, organized smoothly, and exhibited control over sentence structure and mechanics. Such responses occasionally used dialogue to develop character or experimented with suspense. Stories rated "Sufficient" provided a clear sequence of events, but lacked a high level of development, used very simple language and sentence structure throughout the response, and/or occasionally made abrupt shifts in time or place. In responses rated "Uneven," abrupt shifts and errors tended to impede the story's progress, even though many of the writers of "Uneven" responses still attempted a complete story. "Uneven" stories often had the outlines of a story, but were weakened by repetition, uneven development, or problems in controlling sentence structure. Narratives rated "Insufficient" or "Unsatisfactory" were often marked by extreme brevity or lack of control over standard written English.

Informative Writing: Describing and Explaining

Informative writing requires a clear, organized presentation of information about a subject understood by the writer. Informative writing tasks varied among the grades.

In most fourth-grade tasks, students were asked to write about familiar subjects. *Lunchtime* (released in this report) is one such subject. At the eighth and twelfth grades, students were given new information to assimilate and present (in charts, pictures, or letters) and were asked to write for a greater variety of audiences (such as a school board or friend). Some tasks required older students to draw from background knowledge. In the case of the *Save a Book* task, discussed in this report for both eighth- and twelfth-graders, the task is to describe a particular book worth saving for posterity.

As with narrative responses, student informative responses were scored with a 6-level guide that was the same for all informative tasks within a grade. Again, expectations were higher the older the students were. Fourth-graders who wrote "Skillful" and "Excellent" responses developed ideas with specific details and organized them clearly (e.g., through comparison and contrast). In responses rated "Skillful" or "Excellent," eighth- and twelfth-grade students developed information fully with details and organized it well, using clear transitions to link sections. Twelfth-graders often gave more detailed accounts of things read, studied, or experienced than eighth-graders. At grade 12 especially, higher-level responses exhibited mastery over sophisticated sentence structure and word use.

"Sufficient" responses across grades presented a clear sequence of information, but with ideas that were only generally related. Eighth- and twelfth-graders who wrote "Sufficient" responses organized information but did not elaborate on details or provide a clear structure to guide the reader through the information. "Uneven" responses at grades 4, 8, and 12 presented some information, but not in a clear sequence or with patchy development. Informative essays scored "Insufficient" or "Unsatisfactory" were, like narrative responses at these levels, extremely undeveloped or lacking in control over sentence structure and word usage.

Persuasive Writing: Convincing the Reader

As stated in the NAEP writing framework, the primary aim of persuasive writing "... is to influence others to take some action or bring about change. ... This type of writing involves a clear awareness of what arguments might most affect the audience being addressed."[1] To engage students in writing persuasively for the NAEP assessment, every attempt was made to design tasks relevant to students' experiences so that students could craft responses with a meaningful sense of audience. A variety of stimuli were used, frequently text-based, although at grade 4 these were limited to short letters, while at grades 8 and 12 lengthier articles were employed.

The grade 4 persuasive task in this report, *Library Book*, required students to write a letter to the school librarian convincing him or her to reacquire a particular book for the school library. The *School Schedule* task released in this report asked eighth-graders to respond to a newspaper article by writing to their principal defending their position on changing school hours. Most twelfth-grade persuasive tasks broadened the writing context beyond the classroom orientation of fourth-grade tasks and the school orientation of the eighth-grade tasks. Tasks ranged from letters to an editor to debates on the merits of particular social changes. The *Heroes* task presented in this chapter asked students to define heroism and provide specific examples of celebrities and/or people from their community to illustrate and support their definitions.

[1] National Assessment Governing Board. (1998). *Writing Framework and Specifications for the 1998 National Assessment of Educational Progress*, p. 7. Washington, DC: Author.

Student persuasive responses were scored with a 6-level guide that varied slightly by grade. In responses rated "Skillful" or "Excellent," fourth-graders took clear positions, offering clear support for their positions with reasons or examples. At eighth grade, in contrast to fourth grade, in "Skillful" and "Excellent" responses, students went beyond providing evidence or simple reasons for a position to develop a complete argument with appropriate details. In twelfth-grade persuasive writing rated "Skillful" and "Excellent," students constructed coherent arguments throughout their responses. Some students carefully weighed both sides of an issue before choosing one. While students across grades at the highest levels used rhetorical strategies such as humor, repetition, or rhetorical questions to appeal to an audience, such devices were used most often and most skillfully at grade 12.

As with informative writing, "Sufficient" responses at grades 4, 8, and 12 tended to be simple and somewhat undeveloped. Such responses clearly stated a position and provided some support, but were only generally organized, and, at grades 8 and 12, lacked clear transitions among ideas. At all three grades, students whose responses were rated "Uneven" provided a clear position but offered unclear, undeveloped, or disjointed support, and/or were characterized by errors that at times impeded understanding. Responses rated "Insufficient" or "Unsatisfactory" were very undeveloped or lacking in control over sentence structure and word usage.

Evaluating Student Responses

This section presents the scoring guides used in the writing assessment, sample tasks at each grade, and student responses rated "Uneven," "Skillful," and "Excellent" on the writing scoring guides for each task type at each of grades 4, 8, and 12. Displaying sample responses of these three ratings will enable readers to better understand how NAEP scores student writing to distinguish between upper-level writing ("Sufficient" and above) and lower-level writing ("Uneven" and below). Both the scoring guides and the tasks were designed to reflect appropriate expectations for the assessed grade levels, and the sample tasks illustrate the three kinds of writing at each grade level. The frequency of the three kinds of writing included in the assessment at each grade is based on the emphases they receive in instruction as discussed in the NAEP writing framework.[2]

[2] National Assessment Governing Board. (1998). *Writing Framework and Specifications for the 1998 National Assessment of Educational Progress,* p. 48. Washington, DC: Author.

Grade 4 — Narrative Scoring Guide

6 Excellent Response

- Tells a well-developed story with relevant descriptive details across the response.
- Events are well connected and tie the story together with transitions across the response.
- Sustains varied sentence structure and exhibits specific word choices.
- Exhibits control over sentence boundaries; errors in grammar, spelling, and mechanics do not interfere with understanding.

5 Skillful Response

- Tells a clear story with some development, including some relevant descriptive details.
- Events are connected in much of the response; may lack some transitions.
- Exhibits some variety in sentence structure and exhibits some specific word choices.
- Generally exhibits control over sentence boundaries; errors in grammar, spelling, and mechanics do not interfere with understanding.

4 Sufficient Response

- Tells a clear story with little development; has few details.
- Events are generally related; may contain brief digressions or inconsistencies.
- Generally has simple sentences and simple word choice; may exhibit uneven control over sentence boundaries.
- Has sentences that consist mostly of complete, clear, distinct thoughts; errors in grammar, spelling, and mechanics generally do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Attempts to tell a story, but tells only part of a story, gives a plan for a story, or is list-like.
- Lacks a clear progression of events; elements may not fit together or be in sequence.
- Exhibits uneven control over sentence boundaries and may have some inaccurate word choices.
- Errors in grammar, spelling, and mechanics sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Attempts a response, but is no more than a fragment or the beginning of a story OR is very repetitive.
- Is very disorganized OR too brief to detect organization.
- Exhibits little control over sentence boundaries and sentence formation; word choice is inaccurate in much of the response.
- Characterized by misspellings, missing words, incorrect word order; errors in grammar, spelling, and mechanics are severe enough to make understanding very difficult in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Attempts a response, but may only paraphrase the task or be extremely brief.
- Exhibits no control over organization.
- Exhibits no control over sentence formation; word choice is inaccurate across the response.
- Characterized by misspellings, missing words, incorrect word order; errors in grammar, spelling, and mechanics severely impede understanding across response.

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Grade 4 — Informative Scoring Guide

6 Excellent Response

- Develops ideas well and uses specific, relevant details across the response.
- Is well organized with clear transitions.
- Sustains varied sentence structure and exhibits specific word choices.
- Exhibits control over sentence boundaries; errors in grammar, spelling, and mechanics do not interfere with understanding.

5 Skillful Response

- Develops ideas with some specific, relevant details.
- Is clearly organized; information is presented in an orderly way, but response may lack transitions.
- Exhibits some variety in sentence structure and exhibits some specific word choices.
- Generally exhibits control over sentence boundaries; errors in grammar, spelling, and mechanics do not interfere with understanding.

4 Sufficient Response

- Clear but sparsely developed; may have few details.
- Provides a clear sequence of information; provides pieces of information that are generally related to each other.
- Generally has simple sentences and simple word choice; may exhibit uneven control over sentence boundaries.
- Has sentences that consist mostly of complete, clear, distinct thoughts; errors in grammar, spelling, and mechanics generally do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Provides limited or incomplete information; may be list-like or have the quality of an outline.
- Is disorganized or provides a disjointed sequence of information.
- Exhibits uneven control over sentence boundaries and may have some inaccurate word choices.
- Errors in grammar, spelling, and mechanics sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Provides little information and makes little attempt at development.
- Is very disorganized OR too brief to detect organization.
- Exhibits little control over sentence boundaries and sentence formation; word choice is inaccurate in much of the response.
- Characterized by misspellings, missing words, incorrect word order; errors in grammar, spelling, and mechanics are severe enough to make understanding very difficult in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Attempts a response, but may only paraphrase the task or be extremely brief.
- Exhibits no control over organization.
- Exhibits no control over sentence formation; word choice is inaccurate across the response.
- Characterized by misspellings, missing words, incorrect word order; errors in grammar, spelling, and mechanics severely impede understanding across the response.

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Grade 4 — Persuasive Scoring Guide

6 Excellent Response

- Takes a clear position and develops support with well-chosen details, reasons, or examples across the response.
- Is well organized; maintains focus.
- Sustains varied sentence structure and exhibits specific word choices.
- Exhibits control over sentence boundaries; errors in grammar, spelling, and mechanics do not interfere with understanding.

5 Skillful Response

- Takes a clear position and develops support with some specific details, reasons, or examples.
- Provides some organization of ideas by, for example, using contrast or building to a point.
- Exhibits some variety in sentence structure and exhibits some specific word choices.
- Generally exhibits control over sentence boundaries; errors in grammar, spelling, and mechanics do not interfere with understanding.

4 Sufficient Response

- Takes a clear position with support that is clear and generally related to the issue.
- Is generally organized.
- Generally has simple sentences and simple word choice; may exhibit uneven control over sentence boundaries.
- Has sentences that consist mostly of complete, clear, distinct thoughts; errors in grammar, spelling, and mechanics generally do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Takes a position and offers limited or incomplete support; some reasons may not be clear or related to the issue.
- Is disorganized OR provides a disjointed sequence of information.
- Exhibits uneven control over sentence boundaries and may have some inaccurate word choices.
- Errors in grammar, spelling, and mechanics sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Takes a position, but provides only minimal support (generalizations or a specific reason or example); OR attempts to take a position but the position is unclear.
- Is very disorganized or too brief to detect organization.
- May exhibit little control over sentence boundaries and sentence formation; word choice is inaccurate in much of the response.
- Characterized by misspellings, missing words, incorrect word order; errors in grammar, spelling, and mechanics may be severe enough to make understanding very difficult in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Takes a position, but provides no support OR attempts to take a position (is on topic), but position is very unclear; may only paraphrase the task.
- Exhibits no control over organization.
- Exhibits no control over sentence formation; word choice is inaccurate across the response.
- Characterized by misspellings, missing words, incorrect word order; errors in grammar, spelling, and mechanics severely impede understanding across response.

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Narrative Scoring Guide

6 Excellent Response

- Tells a clear story that is well developed and shaped with well-chosen details across the response.
- Is well organized with strong transitions.
- Sustains variety in sentence structure and exhibits good word choice.
- Errors in grammar, spelling, and punctuation are few and do not interfere with understanding.

5 Skillful Response

- Tells a clear story that is developed and shaped with details in parts of the response.
- Is clearly organized, but may lack some transitions and/or have occasional lapses in continuity.
- Exhibits some variety in sentence structure and some good word choices.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

4 Sufficient Response

- Tells a clear story that is developed with some details.
- The parts of the story are generally related, but there are few or no transitions.
- Exhibits control over sentence boundaries and sentence structure, but sentences and word choice may be simple and unvaried.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Attempts to tell a story, but parts of the story are unclear, undeveloped, list-like, or repetitive OR offers no more than a well-written beginning.
- Is unevenly organized; parts of the story may be unrelated to one another.
- Exhibits uneven control over sentence boundaries and sentence structure; may have some inaccurate word choices.
- Errors in grammar, spelling, and punctuation sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Attempts to tell a story, but the attempt may be a fragment and/or very undeveloped.
- Is very disorganized throughout the response OR too brief to detect organization.
- Minimal control over sentence boundaries and sentence structure; word choice may often be inaccurate.
- Errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation interfere with understanding in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Responds to task, but provides little or no coherent content OR merely paraphrases the task.
- Has no apparent organization OR consists of a single statement.
- Minimal or no control over sentence boundaries and sentence structure; word choice may be inaccurate in much or all of the response.
- A multiplicity of errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation severely impedes understanding across the response.

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Grade 8 — Informative Scoring Guide

6 Excellent Response

- Develops and shapes information with well-chosen details across the response.
- Is well organized with strong transitions.
- Sustains variety in sentence structure and exhibits good word choice.
- Errors in grammar, spelling, and punctuation are few and do not interfere with understanding.

5 Skillful Response

- Develops and shapes information with details in parts of the response.
- Is clearly organized, but may lack some transitions and/or have occasional lapses in continuity.
- Exhibits some variety in sentence structure and some good word choices.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

4 Sufficient Response

- Develops information with some details.
- Organized with ideas that are generally related, but has few or no transitions.
- Exhibits control over sentence boundaries and sentence structure, but sentences and word choice may be simple and unvaried.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Presents some clear information, but is list-like, undeveloped, or repetitive OR offers no more than a well-written beginning.
- Is unevenly organized; the response may be disjointed.
- Exhibits uneven control over sentence boundaries and sentence structure; may have some inaccurate word choices.
- Errors in grammar, spelling, and punctuation sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Presents fragmented information OR may be very repetitive OR may be very undeveloped.
- Is very disorganized; thoughts are tenuously connected OR the response is too brief to detect organization.
- Minimal control over sentence boundaries and sentence structure; word choice may often be inaccurate.
- Errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation interfere with understanding in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Attempts to respond to task, but provides little or no coherent information; may only paraphrase the task.
- Has no apparent organization OR consists of a single statement.
- Minimal or no control over sentence boundaries and sentence structure; word choice may be inaccurate in much or all of the response.
- A multiplicity of errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation severely impedes understanding across the response.

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Persuasive Scoring Guide

6 Excellent Response

- Takes a clear position and develops it consistently with well-chosen reasons and/or examples across the response.
- Is well organized with strong transitions.
- Sustains variety in sentence structure and exhibits good word choice.
- Errors in grammar, spelling, and punctuation are few and do not interfere with understanding.

5 Skillful Response

- Takes a clear position and develops it with reasons and/or examples in parts of the response.
- Is clearly organized, but may lack some transitions and/or have occasional lapses in continuity.
- Exhibits some variety in sentence structure and some good word choices.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

4 Sufficient Response

- Takes a clear position and supports it with some reasons and/or examples.
- Is organized with ideas that are generally related, but there are few or no transitions.
- Exhibits control over sentence boundaries and sentence structure, but sentences and word choice may be simple and unvaried.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Takes a position and offers support, but may be unclear, repetitive, list-like, or undeveloped.
- Is unevenly organized; the response may be disjointed.
- Exhibits uneven control over sentence boundaries and sentence structure; may have some inaccurate word choices.
- Errors in grammar, spelling, and punctuation sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Takes a position, but response may be very unclear, very undeveloped, or very repetitive.
- Is very disorganized; thoughts are tenuously connected OR the response is too brief to detect organization.
- Minimal control over sentence boundaries and sentence structure; word choice may often be inaccurate.
- Errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation interfere with understanding in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Attempts to take a position (addresses topic) but response is incoherent OR takes a position but provides no support; may only paraphrase the task.
- Has no apparent organization OR consists of a single statement.
- Minimal or no control over sentence boundaries and sentence structure; word choice may be inaccurate in much or all of the response.
- A multiplicity of errors in grammar or usage (such as missing words or incorrect word use or word order), spelling, and punctuation severely impedes understanding across the response.

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Grade 12 — Narrative Scoring Guide

6 Excellent Response

- Tells a clear story that is consistently well developed and detailed; details enhance story being told.
- Is well organized; integrates narrative events into a smooth telling; effective transitions move the story forward.
- Consistently exhibits variety in sentence structure and precision in word choice.
- Errors in grammar, spelling, and punctuation are few and do not interfere with understanding.

5 Skillful Response

- Tells a clear story that is well developed and elaborated with details in much of the response.
- Is well organized with story elements that are connected across most of the response; may have occasional lapses in transitions.
- Exhibits some variety in sentence structure and uses good word choice; occasionally, words may be used inaccurately.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

4 Sufficient Response

- Tells a clear story that is developed with some pertinent details.
- Is generally organized, but transitions among parts of the story may be lacking.
- Sentence structure may be simple and unvaried; word choice is mostly accurate.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Tells a story that may be clear and developed in parts; other parts are unfocused, repetitive, or minimally developed OR response is no more than a well-written beginning.
- Is organized in parts of the response; other parts are disjointed and/or lack transitions.
- Exhibits uneven control over sentence boundaries and sentence structure; may exhibit some inaccurate word choices.
- Errors in grammar, spelling, and punctuation sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Attempts to tell a story, but is very undeveloped, list like, or fragmentary.
- Is disorganized or unfocused in much of the response OR the response is too brief to detect organization.
- Minimal control over sentence boundaries and sentence structure; word choice may often be inaccurate.
- Errors in grammar, spelling, and punctuation interfere with understanding in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Responds to task but provides little or no coherent content OR merely paraphrases the task.
- Has little or no apparent organization.
- Minimal or no control over sentence boundaries and sentence structure; word choice may be inaccurate in much or all of the response.
- Errors in grammar, spelling, and punctuation severely impede understanding across the response.

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Grade 12 — Informative Scoring Guide

6 Excellent Response

- Information is presented effectively and consistently supported with well-chosen details.
- Is focused and well organized, with a sustained controlling idea and effective use of transitions.
- Consistently exhibits variety in sentence structure and precision in word choice.
- Errors in grammar, spelling, and punctuation are few and do not interfere with understanding.

5 Skillful Response

- Information is presented clearly and supported with pertinent details in much of the response.
- Is well organized, but may lack some transitions.
- Exhibits some variety in sentence structure and uses good word choice; occasionally, words may be used inaccurately.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

4 Sufficient Response

- Information is presented clearly and supported with some pertinent details.
- Is generally organized, but has few or no transitions among parts.
- Sentence structure may be simple and unvaried; word choice is mostly accurate.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Information is presented clearly in parts; other parts are undeveloped or repetitive OR response is no more than a well-written beginning.
- Is organized in parts of the response; other parts are disjointed and/or lack transitions.
- Exhibits uneven control over sentence boundaries and sentence structure; may exhibit some inaccurate word choices.
- Errors in grammar, spelling, and punctuation sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Provides information that is very undeveloped or list-like.
- Is disorganized or unfocused in much of the response OR the response is too brief to detect organization.
- Minimal control over sentence boundaries and sentence structure; word choice may often be inaccurate.
- Errors in grammar, spelling, and punctuation interfere with understanding in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Responds to task, but may be incoherent OR provides very minimal information OR merely paraphrases the task.
- Exhibits little or no apparent organization.
- Minimal or no control over sentence boundaries and sentence structure; word choice may be inaccurate in much or all of the response.
- Errors in grammar, spelling, and punctuation severely impede understanding across the response.

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Grade 12 — Persuasive Scoring Guide

6 Excellent Response

- Takes a clear position and supports it consistently with well-chosen reasons and/or examples; may use persuasive strategy to convey an argument.
- Is focused and well organized, with effective use of transitions.
- Consistently exhibits variety in sentence structure and precision in word choice.
- Errors in grammar, spelling, and punctuation are few and do not interfere with understanding.

5 Skillful Response

- Takes a clear position and supports it with pertinent reasons and/or examples through much of the response.
- Is well organized, but may lack some transitions.
- Exhibits some variety in sentence structure and uses good word choice; occasionally, words may be used inaccurately.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

4 Sufficient Response

- Takes a clear position and supports it with some pertinent reasons and/or examples; there is some development.
- Is generally organized, but has few or no transitions among parts.
- Sentence structure may be simple and unvaried; word choice is mostly accurate.
- Errors in grammar, spelling, and punctuation do not interfere with understanding.

3 Uneven Response (may be characterized by one or more of the following)

- Takes a position and provides uneven support; may lack development in parts or be repetitive OR response is no more than a well-written beginning.
- Is organized in parts of the response; other parts are disjointed and/or lack transitions.
- Exhibits uneven control over sentence boundaries and sentence structure; may exhibit some inaccurate word choices.
- Errors in grammar, spelling, and punctuation sometimes interfere with understanding.

2 Insufficient Response (may be characterized by one or more of the following)

- Takes a position but response is very undeveloped.
- Is disorganized or unfocused in much of the response OR clear but very brief.
- Minimal control over sentence boundaries and sentence structure; word choice may often be inaccurate.
- Errors in grammar, spelling, and punctuation interfere with understanding in much of the response.

1 Unsatisfactory Response (may be characterized by one or more of the following)

- Attempts to take a position (addresses topic), but position is very unclear OR takes a position, but provides minimal or no support; may only paraphrase the task.
- Exhibits little or no apparent organization.
- Minimal or no control over sentence boundaries and sentence structure; word choice may be inaccurate in much or all of the response.
- Errors in grammar, spelling, and punctuation severely impede understanding across the response.

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Grade 4 Sample Narrative Task and Student Responses

Grade 4

Narrative: *Unusual Day*

Unusual Day presented students with a sequence of full-color, imaginative drawings designed to provide a framework for creating a narrative. Student responses were rated according to the 6-level grade 4 narrative scoring guide.

IMAGINE!

One morning you wake up and go down to breakfast.

This is what you see on the table.

You are surprised. Then . . .

...when you look out the window, this is what you see.

Write a story called "The Very Unusual Day" about what happens until you go to bed again.

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Table 4.1 Percentage scored "Uneven" or better for narrative writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
87	37	90	100	100

[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses often consisted of undeveloped lists of things the narrators of the stories saw in the stimulus pictures. The response below also exhibits typical "Uneven" response difficulties with sentence boundaries, grammar, and spelling that, at times, interfere with the attempt to tell the story. An "Uneven" or better rating for this task was assigned to 87 percent of the responses to the task, and "Uneven" or better responses map at the scale score 121.

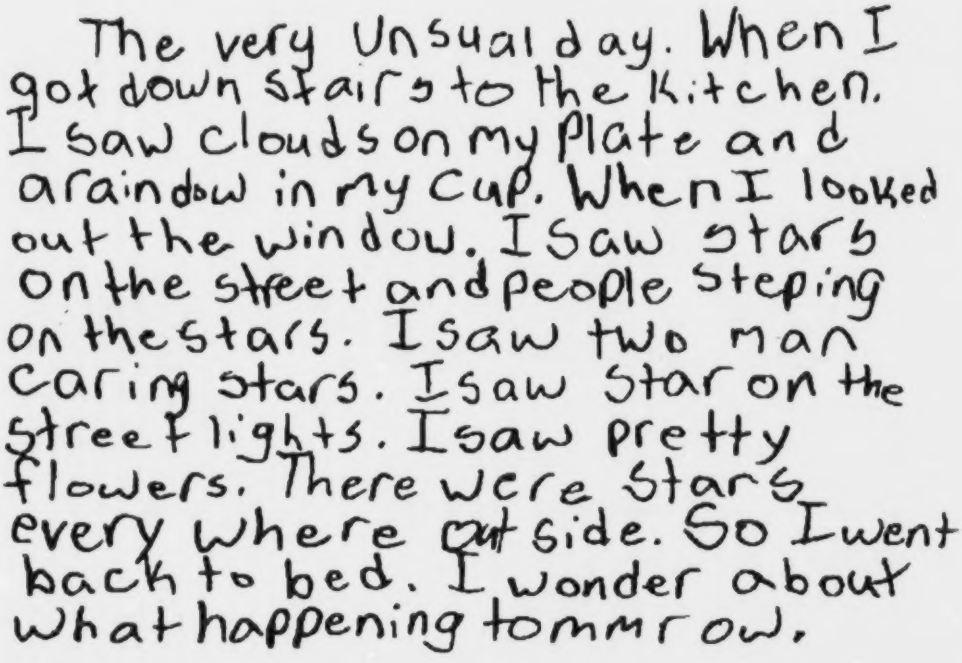
The very Unsual day. When I got down stairs to the Kitchen. I saw clouds on my plate and a raindow in my cup. When I looked out the window. I saw stars on the street and people steping on the stars. I saw two man caring stars. I saw star on the street lights. I saw pretty flowers. There were stars every where out side. So I went back to bed. I wonder about what happening tommrow.

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Table 4.2 Percentage scored "Skillful" or better for narrative writing task, by achievement level range, grade 4: 2002

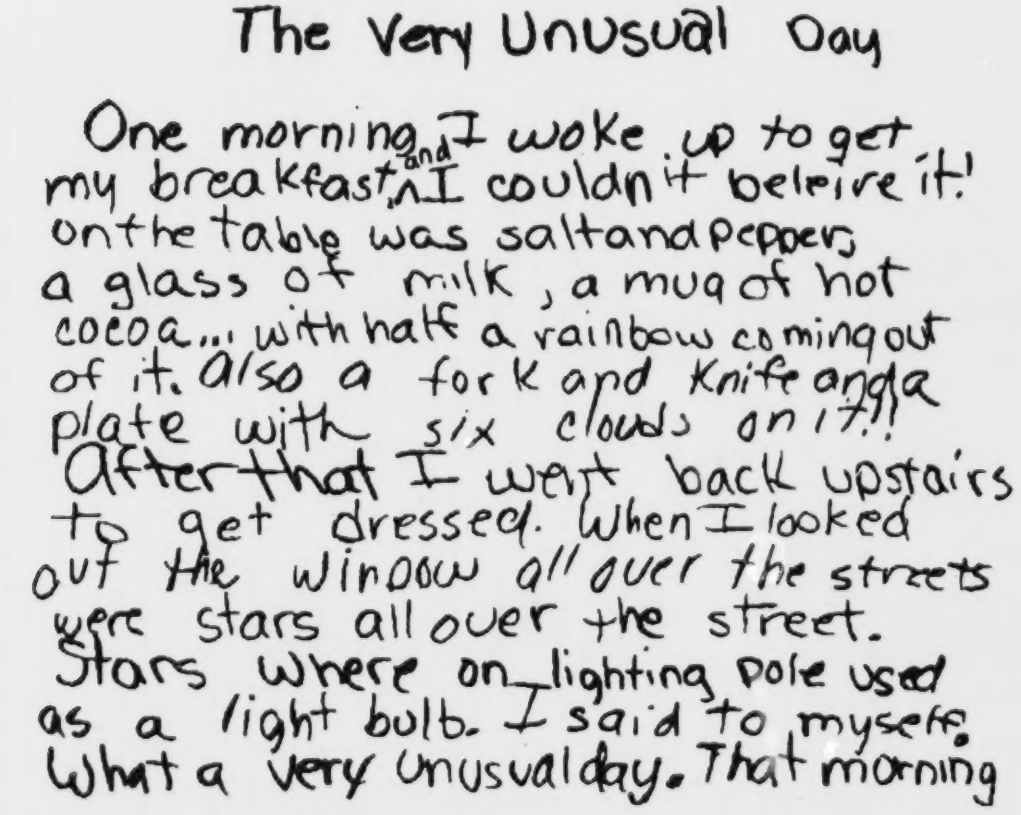
Grade 4

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
18	#	6	46	93

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

In "Skillful" responses, students used details to develop their stories in parts of the response. They provided a clear structure to their stories, though with an occasional lack of transitions, as shown in the sample response. The "Skillful" or better rating was given to 18 percent of the responses to this task. These responses map at the scale score 202.



The Very Unusual Day

One morning I woke up to get my breakfast and I couldn't believe it! on the table was salt and pepper, a glass of milk, a mug of hot cocoa... with half a rainbow coming out of it. also a fork and knife and a plate with six clouds on it!! After that I went back upstairs to get dressed. When I looked out the window all over the streets were stars all over the street. Stars where on lighting pole used as a light bulb. I said to myself. What a very unusual day. That morning

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I went to my friends house but she was not home. So I walked back to my house. Right when I got in the phone rang. It was my friend. We talked all day until 8:00. I told her I had to go to sleep. Then it happened in front of my face outside it started to rain small one inch stars. I went upstairs to get into my pajamas. After I went to sleep. The next morning when I went to eat breakfast on the table was orange juice, knife and fork, bacon and an omlet. Plus salt and pepper. When I went to look out the window everything was back to normal. Yesterday was a very Unusual Day.

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Table 4.3 Percentage scored "Excellent" for narrative writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
4	#	#	9	52

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses developed ideas with relevant details throughout the story and exhibited variety in sentence structure. In the response shown here, transitions guide the reader through the plot, and there are some very good specific word choices, such as "sharp edges" and "almost unthinkable." The "Excellent" rating was given to 4 percent of the responses to this task. These responses map at the scale score 240.

Calandra woke up on Friday, April 2nd to what she thought would be a perfectly normal day. It actually wouldn't be.

Calandra went down to breakfast. Instead of eggs and bacon, there were clouds on her plate. And a rainbow coming out of her hot chocolate.

When Calandra looked out the window, she saw Mr. Bumble outside looking at the star mess that had fallen from the sky.

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Calandra was careful not to step on the sharp edges when she went to school.

When school let out, Calandra wondered what would happen at her piano lessons. What did happen was almost unthinkable. Ms. Gretchon had her play the trumpet. Not only that, but Calandra liked it so much she decided to stay on the trumpet.

At 5:00 Calandra left to baby-sit Charolette Vren. And what could happen next other than the fact that Chardette's house was upside down. Calandra kept tripping.

At home, her house was ok, but dinner was topsy, turvy because it was steak and cereal.

Calandra had no homework, so she read. The book was printed upside down. So Calandra turned the book 90° but nothing changed. Weird she thought, as her bed turned and rested on the ceiling.

When Calandra woke up, everything was back to normal and it was Saturday.

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Grade 4 Sample Informative Task and Student Responses

Grade 4

Informative: *Lunchtime*

To make this task accessible to all grade 4 students, *Lunchtime* asked them to describe an experience they have each day: lunchtime. Students responded by focusing on many different aspects of their lunchtime, including descriptions of physical environment, activities, and their feelings about lunchtime at their school. Percentages and scores below suggest that this informative task was more challenging for grade 4 students than the narrative task *Unusual Day*. Responses to this task were rated according to the 6-level, grade 4 informative scoring guide.

Describe what lunchtime is like for you on a school day. Be sure to tell about your lunchtime so that someone who has never had lunch with you on a school day can understand where you have lunch and what lunchtime is like.

Table 4.4 Percentage scored "Uneven" or better for informative writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
88	48	92	100	100

[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses provided incomplete and, at times, repetitive information and also exhibited problems with run-on sentences, as the response below shows. The "Uneven" or better rating was assigned to 88 percent of the responses to this task. These responses map at the scale score 112.

A day at lunch is when you come into a big room and you stand in line on one side of the room. When you go to this little room you stand in line. You have a choice of two kinds of food sometimes the food is nasty and sometimes its good you will have a fruit bar. You will go around the line then you have a seat and eat.

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Table 4.5 Percentage scored "Skillful" or better for informative writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
16	#	6	38	82

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" responses often provided clearly organized sequences of lunchtime activities. The response below does this with some well-chosen specific details, such as the reference to the lunch moms wiping off the tables. There is some sentence variety as well. However, the response lacks the development of an "Excellent" response. The "Skillful" or better rating was assigned to 16 percent of the responses to this task and such responses map at the scale score 216.

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Lunch Time

Lunch time in my school is very noisy, because everybody talks. The 4th, 5th, and 6th graders at [Name of School] have to eat lunch at the same time. We all sit at tables that are set up in the gym, across half of the basketball court. We eat lunch every day from 11:45 am through 12:00pm. At lunch everyone eats and talks to their friends untill the lunch-moms dismiss them so they can go to recess. When everybody has cleared out of the lunch room, the janators and lunch moms whipe off the tables, just on time for the 7th and 8th graders to come into the room for lunch. After lunch and recess I go back to my 4th grade classroom, which is in the basement. I like lunch time al lot — its my favorite time of the day!

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Table 4.6 Percentage scored "Excellent" for informative writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
1	#	#	3	24

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses provided very clear and well-developed descriptions of lunchtime. The response shown here presents an extensive description of lunch with well-chosen details and clear transitions across the response. Word choices are effective and sentence structure is varied. The "Excellent" rating was assigned to 1 percent of the responses to this task and these responses map at the scale score 273.

At lunchtime I usually eat cold lunch. My mother packs me a sandwich, a drink, fruit, and a treat. When I get in the lunchroom I find an empty table and sit there, and eat my lunch. My friends come and sit down with me. I open my lunch and start to eat. First I eat my sandwich then I open my drink, then eat my fruit and last but not least my treat. After that I sit quietly until I'm

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dismissed. When I am I go into the bathroom and clean my teeth because I have braces.

When I an done with that I go outside and put my lunchbox away and go find my friends, We usally play four square or play on the play ground, If we are not on the play-ground or on the four square ground we are on the feild playing tag, kickball, or soccer. I really like to play soccer and my friends do too.

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Grade 4 Sample Persuasive Task and Student Responses

Grade 4

Persuasive: *Library Book*

In the *Library Book* task, students were asked to write a letter convincing the school librarian to purchase a new copy of the student's favorite book, which is missing from the library. While some students chose to describe the contents of a specific book, others chose to make arguments based on how they and friends or family members enjoy reading. Responses to this task were rated according to the 6-level, grade 4 persuasive scoring guide.

Imagine this situation:

Your favorite book is missing from your school library. It might be a book that you like to read over and over again. Or it might be a book that your teacher or parent has read to you. Some of your friends also like to read this book. The school librarian is not sure she wants to buy the book again.

Write a letter to convince your school librarian to buy the book again. In your letter, give lots of reasons why the book should be in your school library.

Table 4.7 Percentage scored "Uneven" or better for persuasive writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below Basic 114 or below[1]	At Basic 115–175[1]	At Proficient 176–224[1]	At Advanced 225 or above[1]
88	43	91	100	100

[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses took clear positions, but lacked either development or control over sentence structure, or sometimes both. The response shown below takes a clear persuasive position in response to the task, but offers limited support and is somewhat repetitive. The "Uneven" or better rating was given to 88 percent of the responses to this task. These responses map at the scale score 114.

Dear Librarian,

I think you should buy the book again because everybody likes it. I like to read it over and over again. Both of my parents like it too. Everybody voted that you should buy that book back. I hope that's a good enough reason. lease buy the book.

Sincerly,

[Student's name]

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Table 4.8 Percentage scored "Skillful" or better for persuasive writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
17	#	5	40	89

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" persuasive responses attempted to persuade the school librarian to reacquire a chosen book, developed those reasons in parts of the response, and provided some transitions (but not consistently) to connect reasons for the students' positions. This response exhibits these features, and also makes a direct address to the intended audience: "Think of the happiness you will bring to the kids . . . ." The "Skillful" or better rating was given to 17 percent of the responses to this task; these responses map at scale score 215.

Dear librarian,

Please get the book back. When I read that book it makes me feel like I am in it, It also makes me happy when I am sad. It could help kids also feel happy when their sad. It could also help them imagen what they want. If you get the book I promise I will help you fix the books when you need help. My dad will feel so happy reading the book to me. Think of the happyness you will bring to the kids so please please get the book back I express how I felt about this book I hope you get It back soon.

Sincerly, [Student's name]

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Table 4.9 Percentage scored "Excellent" for persuasive writing task, by achievement level range, grade 4: 2002

Grade 4

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 114 or below[1]	At *Basic* 115–175[1]	At *Proficient* 176–224[1]	At *Advanced* 225 or above[1]
2	#	#	4	34

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses consistently developed clear, focused positions with well-chosen reasons and examples. In this response, the variety of sentences and precise word choices ("I am quite sorry for this inconvenience") increase the strength of the argument. The "Excellent" rating was given to 2 percent of the responses to this task; such responses map at the scale score 255.

Dear [Name of Librarian],

I am quite sorry for this inconvinience, but my favorite book, Gypsy Summer is missing from your collection. We have so many old books on the shelves, that they are falling apart. Gypsy Summer is an educational book, because it has the language of the Gypsies, and I think we could use a new book on our shelves. I feel that people may want to read Gypsy Summer. It is quite an interesting book. Again, I hope it if it is not inconvinient. You can buy it at Half Price Books, Barnes and Noble, and many other bookstores you may know of.

Sincerely ☺

[Student's Name]

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Grade 8 Sample Narrative Task and Student Responses

Grade 8

Narrative: *President for a Day*

President for a Day engaged students' imaginations by asking them to develop a story about waking up to find themselves President of the United States. Some students chose to present the experience as a dream, while others told the story as a real-life challenge. Responses to this task were rated according to the 6-level, grade 8 narrative scoring guide.

Imagine that you wake up one morning to discover that you have become the President of the United States. Write a story about your first day as President.

Table 4.10 Percentage scored "Uneven" or better for narrative writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
90	51	94	100	100

[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses often identified actions they would perform as president, but listed them rather than developing them into a full story, as does the response shown here. The "Uneven" or better rating was given to 90 percent of the responses to this task. Such responses map at the scale score 110.

I would do a lot of things on my first day as president. The first thing I would do is call my family. Then I will eat an enormous breakfast. Then I would ride through Washington DC waving hi to everyone. I would then tour the White House and look at all of my suits. I would then look at all of money and go to the stores. I would buy anything I wanted and by presents for my family. Then I would go back and study all of my powers. Then I would eat a very large lunch and dinner. Then I would go sleep. All in all, I would do a lot of things on my first day as President

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Table 4.11 Percentage scored "Skillful" or better for narrative writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
20	#	8	47	91

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" responses provided more depth to the stories than "Uneven" responses by developing events and characters with detail. In the response shown below, the student developed some parts of the response, including the feeling of waking up as president in new surroundings. While there is some good sentence variety, there are also lapses in continuity caused by gaps in development of the remainder of the day and evening. The "Skillful" or better rating was given to 20 percent of the responses to this task and these responses map at the scale score 201.

It was my first official day being the president. I woke up early that day because I was extremely eager to begin my work.

I woke up in the most enormous bed I've ever laid eyes on. There were layes of royal blue silk sheets under a soft white down comforter. The deep red pillows supported my head and had helped me to enjoy a good nights' rest.

I hesitated before climbing out of bed, not wanting to leave my sense of eutopia. I eventually found myself making my way to the walk-in closet across the room. In it were countless pants, shirts, shoes, and ties that were all unique, so it wasn't a difficult decision.

I heard a knock on the door and call for them to come in. It was my maid. Yes, I had a maid! I couldn't believe it.

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I sprang downstairs to the breakfast table as numerous people were awaiting to serve me. It was delicious.

After brushing my teeth and doing all of the other essentials, it was time for me to take charge.

My office was humungus and was covered, floor to ceiling with rows and rows of books. In front of gigantic windows, was my desk, where I sat for many hours of the day stressing out over papers I needed to sign and decisions I had to make. It wasn't as simple as I thought.

That night I had a dinner party to attend to with some important businessmen. Everything ran smoothly.

I returned home that night to my cozy bed, just in time for yet another good nights' sleep. Only to wake up and repeat it all tomorrow. What a life I live. ☺

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Table 4.12 Percentage scored "Excellent" for narrative writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
5	#	1	13	52

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses provided detail and development across the response and exhibited sentence variety and specific word choices. The sample response shown below uses well-chosen descriptive detail to develop events that occur over the day, doing so with sentence variety and even some suspense, as when the security SWAT team bursts into the office. The "Excellent" rating was given to 5 percent of the responses to this task and these responses map at the scale score 232.

Today was my first day in office as president of the United States. Wow! What a huge job. Today was a very confusing day for me. This is how it started.

I woke up early and got ready for the day. I took a shower, ate breakfast, and got dressed in my very best outfit. Then I went to the office.

The office was huge! It had big clean windows, with bright, warming rays of sunshine streaming through the spotless glass. Out the window, I saw a huge lawn of freshly cut grass, that was as green as I had ever seen. I could see the lawnmower as it cut in neat little rows and columns, and I opened a window to smell the wonderful aroma of that fresh cut grass.

All of the sudden, I heard the ear-piercing shriek of a fire alarm. I saw red flashing lights all around me, and I could hear the words, "Security Breach!" being shouted in the hallway. Then the SWAT Team burst in to the

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room and shouted, "Don't move! Put your hands on your head! Turn around facing me, and spread your legs!"

As soon as I turned around, they all started apologizing. I told them not to worry about it, and they went on their way.

After that, the day went on without another incident. I could hear the phones at my secretary's desk ringing off the hook. Many important looking people came in to ask my advice on some of the nation's issues, and I answered all their questions to the best of my ability.

At lunchtime, I took an extra long lunch break to tour the White House. I never realized how big it was! I got lost three times, and I had to use my cell phone to call my secretary. She had to come find me and bring me back to the office.

The actual food at lunch was weird. I got all these different

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gourmet foods, half of which, I'd, don't even eat. Tomarrow I'll have to ask for McDonald's.

When I got back to the office, my personal phone was ringing. It was one of my friends from back home, wondering how I was doing. I was in tears by the time I hung up, because I realized just how much I miss my friends.

The day started off good, and I felt like I had tons of luxurious space around me, but after the phone call I felt like I was trapped in a small cage.

I decided to go for a walk outside with my dog Suzie. The fresh air made me feel much better.

I don't know if I can do this job, but I'll try my best!

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Grade 8 Informative Task and Student Responses

Grade 8

Informative: *Save a Book*

For *Save a Book*, students were asked to explain what book they would save by memorization if they lived in a society where reading was not allowed. Since any book could be chosen, a wide range of responses was acceptable. Responses to this task were rated according to the 6-level, grade 8 informative scoring guide.

A novel written in the 1950's describes a world where people are not allowed to read books. A small group of people who want to save books memorize them, so that the books won't be forgotten. For example, an old man who has memorized the novel *The Call of the Wild* helps a young boy memorize it by reciting the story to him. In this way, the book is saved for the future.

If you were told that you could save just one book for future generations, which book would you choose?

Write an essay in which you discuss which book you would choose to save for future generations and what it is about the book that makes it important to save. Be sure to discuss in detail why the book is important to you and why it would be important to future generations.

Table 4.13 Percentage scored "Uneven" or better for informative writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
84	36	88	100	100

[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses to this task were disorganized, lacked development, or were marked by errors that sometimes interfered with understanding. The "Uneven" response shown below offers some information about the plot that makes the book exciting to the student, but suffers from a lack of development. The "Uneven" or better rating was given to 84 percent of the responses to this task; such responses map at scale score 117.

I think Moby Dick would be a good book to save because It is very interesting, it keeps you excited. The book is about a Captain that wants, not just any whale but Moby Dick. Moby Dick is a huge Whale that took the captains leg many years ago. The captain wants to kill the whale so badly that he would die trying.

It is also good because its about a man that can go so insane that he would sacrifice his own people, his own mates, his own friends.

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Table 4.14 Percentage scored "Skillful" or better for informative writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
14	#	4	34	81

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" responses developed information with some details and clear organization, but had occasional lapses in continuity. The "Skillful" response shown below uses well-constructed sentences and good word choices to discuss the qualities of the book *Little Women*. However, the response has lapses in continuity because the author does not support enough of her claims about the book's qualities with examples from the work itself. The "Skillful" or better rating was given to 14 percent of the responses to this task and responses at this level map at the scale score 215.

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If I could save only one novel for future generations, it would be a timeless classic. The novel would have to be interesting, but not excentric. It would have to beautiful, but not too mushy. It would have to show emotions, such as joy, sorrow, pain, and love. Most definitely, it would have to be honest, and true-to-life. If I could save only one novel for future generations, it would be Louisa May Alcott's Little Women.

Little Women has everything a person could want in a novel. It has someone that everyone can relate to (if you're not like Jo, then you can relate to either Beth, Meg, Amy, or Marmee); it has love, and heart-break; pain and sorrow; death and reminiscence. It even has the one thing that everyone enjoys: honesty/truth.

So, in conclusion, I would save Little Women, if I could save only one novel. I won't reitterate the reasons because I think you can see why I chose Louisa May Alcott's most famous work.

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Table 4.15 Percentage scored "Excellent" for informative writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
4	#	#	8	46

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses provided well-chosen details and exhibited sentence variety and precise word choices across the response. In the sample response below, consistently well-chosen detail is provided to support his or her views about *The Giver*. The response is very well organized, with strong transitions. The student's choice of words and comfort with varied sentence structure add power to his or her insights about the importance of books and reading. The "Excellent" rating was given to 4 percent of the responses to this task. Such responses map at the scale score 241.

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If I could only save one book, I would save The Giver by Lois Lowry. The Giver is one of my favorite books. I think it would benefit future generations, because it shows human faults, gives hope, and it models the "real-life" situation.

The Giver is about a very secluded community of people. Th goverment chooses spouses, children, jobs, and determines every course of everyone's lives, except for the Receiver of Memory. He or she alone has all the knowledge of the past. The Receiver can see in color, feels true pain, recognizes animals. he or she holds the world's history in his or her mind. The people of old had chosen to give up color, weather, choosing. Everything was a state of "sameness." Everyone believes everything the government says, everyone follows the rules. This shows how gullible and dependent the human race truly is. To lead an entire community by the nose for countless generations is

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amazing, and the people themselves had chosen their fate.

Even though this book tells of a very deprived community it does give hope. Jonas, the protagonist, and Gabriel, his adoptive brother, run away from this community. After many days of running from the searching of the community. Jonas hears something. He hears music. Singing and music were not allowed in the community. When Jonas hears the singing he remembers a memory he had received. It was a memory of love. The book closes with Jonas riding towards the new community he sees radiating love.

This book is also very similar to the situation presented. Although there are books, they are not read. Reading for pleasure is simply not done. Books open passages for people. They shed light

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on different countries, culture, ideas, and much more. Jonas's community is so sheltered None of the ordinary citizens can remember a time of choosing of differentness. Everything is the same for everyone. If these people had had books, then they would have known what they were missing. They could have felt true emotions and really lived the life they were Given.

The Giver is an outstanding book. It has morals, a story and is very realistic. If I could I would save The Giver.

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Grade 8 Persuasive Task and Student Responses

Grade 8

Persuasive: *School Schedule*

School Schedule required students to read a short newspaper article about the sleeping habits of adults and children, and how those habits ought to influence school schedules. Students were able to react to the article and use its content to frame their arguments. Students offered a range of positions, some arguing both for and against changing the school schedule, and discussed potential effects of a schedule change on in-school performance, participation in after-school activities, and family life. Responses to this task were rated according to the 6-level, grade 8 persuasive scoring guide.

Imagine that the article shown below appeared in your local newspaper. Read the article carefully, then write a letter to your principal arguing for or against the proposition that classes at your school should begin and end much later in the day. Be sure to give detailed reasons to support your argument and make it convincing.

Studies Show Students Need To Sleep Late

Night Owls Versus Early Birds

The *Journal of Medicine* announced today the results of several recent studies on the sleep patterns of teenagers and adults. These studies show that adults and teenagers often have different kinds of sleep patterns because they are at different stages in the human growth cycle.

The study on teenagers' sleep patterns showed that changes in teenagers' growth hormones are related to sleeping patterns. In general, teenagers' energy levels are at their lowest in the morning, between 9 a.m. and 12 noon. To make the most of students' attention span and ability to learn, the study showed that most teenagers need to stay up late at night and to sleep late in the morning. They called this pattern "the night owl syndrome."

Studies of adults (over 30 years of age) showed the opposite sleep pattern. On average, adults' energy levels were at their lowest at night between 9 p.m. and 12 midnight and at their highest between 6 and 9 a.m. In addition, a study of adults of different ages revealed that as adults get older they seem to wake up earlier in the morning. Thus, adults need to go to sleep earlier in the evening. Researchers called this sleep pattern "the early bird syndrome."

Researchers claim that these studies should be reviewed by all school systems and appropriate changes should be made to the daily school schedule.

Table 4.16 Percentage scored "Uneven" or better for persuasive writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
85	34	90	100	100

[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses took a clear position about changing the school schedule, but offered unclear or undeveloped support. Further, they often had difficulties with sentence boundary control. The "Uneven" response shown below does make a few clear points in support of a position, but none of those points are sufficiently developed. The "Uneven" or better rating was given to 85 percent of the responses to this task. These responses map at the scale score 119.

I am against changing the school schedule. It would take away time that students have to spend with their family and friends.

Students would be sleeping in the morning, doing homework after school. This leaves no time for themselves.

This would also interfer with other activities like after school sports programs. It would also disrupt parents schedule and keep them up later than needed.

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Table 4.17 Percentage scored "Skillful" or better for persuasive writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 113 or below[1]	*At Basic* 114–172[1]	*At Proficient* 173–223[1]	*At Advanced* 224 or above[1]
18	#	5	43	93

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" responses offered clear positions supported with reasons and examples in parts of the response. The following sample response does develop the arguments and is reasonably organized; however, transitions between ideas and arguments are not always present, and sentence structure and word choice are relatively unvaried. As with many upper-level responses, rhetorical questions are addressed to the audience (e.g., "What happens when we get older?"). The "Skillful" or better rating was given to 18 percent of the responses to this task and such responses map at the scale score 205.

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Dear Principal,

I think you Should Keep the daily schedule as it is. As much as I would like to Stay up late and sleep in, I don't think you Should change the schedule First of all, if you did change the schedule, the students would get home late and have to do their chores and go to bed. Thus, leaving no time for homework or recreation. Most of the kids I know play sports and if they got home late then there would be no time for practices, games, etc. Also, everyone in a family isn't a teenager, so they would be on a completely different schedule. So you would never be able to spend quality time with the people in your family. What happens when we get older? We can't keep these bad habits forever If we do it long enough we Might not be able to get out of it. Someday we will have to get up early and go to work. students have already adapted to the early schedule of having to get up and go to School. Why Change it?

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Table 4.18 Percentage scored "Excellent" for persuasive writing task, by achievement level range, grade 8: 2002

Grade 8

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 113 or below[1]	At *Basic* 114–172[1]	At *Proficient* 173–223[1]	At *Advanced* 224 or above[1]
3	#	#	6	46

Percentage rounds to zero.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses, apart from being consistently well developed and organized, sometimes used a variety of persuasive techniques to convince the reader. For example, the "Excellent" response shown below addresses potential counterarguments. The response is notable for its focused, well-organized development of an argument about tired teachers. The "Excellent" rating was given to 3 percent of the responses to this task. These responses map at the scale score 241.

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Dear Principal,

I am an eighth grade student in your school, and I believe that the schedule should not be changed. While it may be true that students are not at their fullest potential in the morning, it is also true that teachers are not at their fullest potential in the afternoon. If you did change the schedule, the students may be more ready to learn, but the teachers will be less ready to teach. What good is it to have potentially good students if they cannot be taught well? At least if the teachers are teaching their best to students some information has to settle into their minds. If the teachers can teach well enough, the students will learn what they need to, regardless of whether they feel like learning or not. It

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doesn't take much of an effort for students to hear the information, but it takes a lot for a teacher to process the information, figure out how to give it to the students in an understandable forum and then actually teach it to them.

Also, if students are awake and fully energized, there is more of a chance they may cause a disturbance in the classroom. Furthermore, if teachers are tired, they won't be as strict as they should be, and the disturbances will worsen.

The way the schedule is set up now, both students and teachers have a fair share of a suitable times. The teachers have the morning and the students

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have the afternoon.

I know you will probably be recieving lots of student letters arguing for schedule changes, so please keep my letter in mind as you read them. Thank you.

Your student,

[Student's Name]

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Grade 12 Sample Narrative Task and Student Responses

Grade 12

Narrative: *Tall Tale*

Tall Tale offered an example of a familiar form of American folk literature to engage twelfth-grade student writers, and asked students to create their own tall tales. The task evoked a wide range of responses, from imaginative feats of strength to saving entire towns from natural disaster. Responses to this task were rated according to the 6-level grade 12 narrative scoring guide.

A tall tale is a type of story that uses exaggeration to solve a real-life problem. As the story progresses, the main character demonstrates superhuman abilities to overcome ordinary obstacles. The story shown below is an example of a tall tale.

A Flood and Drought Tale

It had been raining without a break for four days. The roads were flooded, power outages were common, and dry basements had become a thing of the past. At the same time, a drought on the other side of the country was responsible for dangerously low reservoir levels, thirsty cattle, and parched fields.

Victor, a young man who lived in one of the flooded towns, was very unhappy about the continuing bad weather. Not only had he spent the last two days bailing water from his family's basement, but he was due to miss out on a camping trip, originally planned for the upcoming weekend, that he and his friends had been excitedly anticipating.

Victor put a small rope in his back pocket and walked outside. As he stood with the rain pelting down on him, he grew until he stood a mile high. Standing up above the rain clouds, he took the rope from his back pocket. The rope was now hundreds of yards long and Victor used it to lasso the rain clouds. Holding the clouds in the rope, he walked across the country taking fifty-mile steps. He untied the clouds over the drought-stricken land and a heavy rain began to fall there. Then he walked back to his house in his town where the sun was now shining, shrank back down to his regular size, and went inside to pack for the camping trip.

Imagine that you will participate in a "tall-tale writing contest" at your school. Write your own tall tale. You can write about yourself, someone you know, or someone you imagine. Be sure to give your main character whatever superhuman abilities are necessary to save the day.

Table 4.19 Percentage scored "Uneven" or better for narrative writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
94	79	99	100	‡‡‡

‡‡‡ Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses told stories that were clear in parts, while other parts were unfocused or minimally developed. Clarity in some responses was affected by disjointed organization, uneven control over sentence boundaries or structure, or errors in grammar. The sample included here does attempt to tell a story, but has large gaps in development that make the response unclear. The "Uneven" or better rating was given to 94 percent of the responses to this task. Such responses map at the scale score 86.

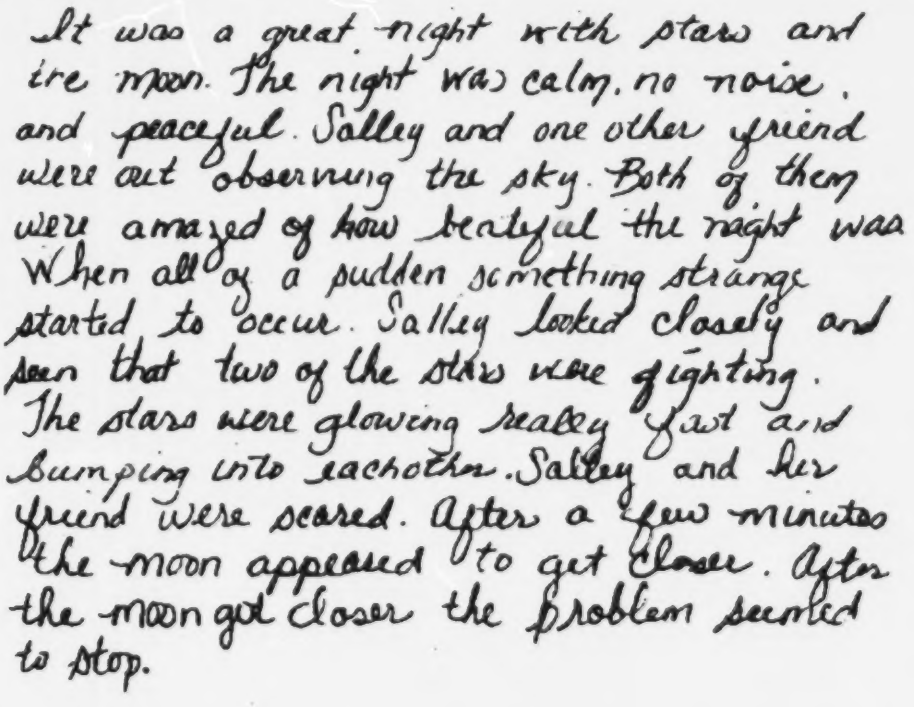
It was a great night with stars and the moon. The night was calm, no noise, and peaceful. Salley and one other friend were out observing the sky. Both of them were amazed of how beatyful the night was When all of a pudden something strange started to occur. Salley looked closely and seen that two of the stars were fighting. The stars were glowing really fast and bumping into eachother. Salley and her friend were scared. After a few minutes the moon appeared to get closer. After the moon got closer the problem seemed to stop.

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Table 4.20 Percentage scored "Skillful" or better for narrative writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
29	3	24	66	•••

••• Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" responses told well-developed and well-organized stories with occasional lapses in continuity and some sentence variety and good word choices. The story shown below exhibits a mix of well-executed sentences and more awkward sentences with simple word choices. The response's well-chosen details about Jacob and the snow crisis balance these weaknesses. The "Skillful" or better rating was given to 29 percent of the responses to this task and such responses map at the scale score 192.

Jacob the Strongman

In the town of Exercleap, the citizens would always experience problems with the snow. Usually for months, it would snow and snow on the town, causing horrible snowstorms and on top of that, when the snow began to thaw, flooding would start ruining businesses and homes. the mayor of the town knew about the problem and called for a town meeting, the citizens of the town talked and debated and decided that they would need the help of Jacob the strongman to solve the problem.

Jacob was a very strong man, he could lift anything from big trucks to gigantic houses whatever required great strength, Jacob was the man for the job. However this time it was a difficult problem. the town wanted Jacob to lift up the town and bring it to a higher elevation to prevent flooding and to minimize the amount of snow being collected. He thought to himself "Could I really do it?" He debated with this question for many days and decided he will do what is best for the town.

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So on one uncommon sunny day, the town waited anxiously for Jacob. As he came out of his house, Jacob had a determined look on his face and he talked to no one. then he went to the edge of town and began pulling the ground. He was pulling and pulling and it seemed as if Jacob couldn't do it, but he kept on trying. He was turning so red from all the exertion and effort he was using until finally the whole town was lifted off the ground. Everyone was ecstatic and cheered for Jacob. Jacob brought the town to a higher mountain and they had a huge celebration. All of that "work took a matter of hours and everyone was impressed by Jacob's heroism. Since then there was never a strong man like Jacob who lived in Evergreen. Although, Jacob is already gone, the town people know that all of their happiness and the salvation of their town was due to the strongman, Jacob.

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Table 4.21 Percentage scored "Excellent" for narrative writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
6	#	2	20	•••

Percentage rounds to zero.
••• Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses consistently used well-chosen details and integrated narrative elements into their stories. This sample response tells a compact, smooth story with very effective details, consistent variety in sentence structure, and good word choices that develop Maury's character (e.g., "Ping!' Maury cried out with glee . . ."). The "Excellent" rating was given to 6 percent of the responses to this task. Such responses map at the scale score 243.

Ms. Smith was not your typical teacher. She was mean and cold-hearted to her students, giving them one day to complete 10-page assignments. She did not care if her students did well in her class or not, for she was too occupied with finding more work to give to her students.

All of Ms. Smith's students were hopelessly discouraged when, on Tuesday, she assigned them a 15-page essay to complete and turn in the next day. All but Maury. Fortunately for Maury, he was an extremely clever kid who thought he could do anything. He had an idea to how he could pull off his essay in the little time he was given.

That evening, Maury slaved away at his essay with renewed energy in hopes of his brilliant plan working. When the sun set, Maury was not even half finished his paper. He worked all through the night, writing, thinking, researching, more writing, and when the kitchen clock read "quarter past six", he knew his plan needed to start.

So, with fingers crossed, Maury took his beloved slingshot outside to the driveway,

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Where he then gathered a few rocks. Aiming carefully at the rising sun, he took a shot. 'Ping!' Maury cried out with glee as he watched the sun, which he just hit with great precision, fall back below the horizon. Hurrying back inside to finish his essay, Maury was satisfied with his success to gain a few more precious hours to work, giving the title "all-nighter" a new meaning.

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Grade 12 Sample Informative Task and Student Responses

Grade 12

Informative: *Save a Book*

Save a Book was previously discussed for grade 8 informative writing. Like eighth-graders, twelfth-grade writers responded well to this task, writing about books ranging from classics such as Homer's *Iliad* to popular favorites and even the occasional history textbook. Upper-level responses sometimes used the task as a springboard to make observations about social issues. Responses to this task were rated according to the 6-level, grade12 informative scoring guide.

A novel written in the 1950's describes a world where people are not allowed to read books. A small group of people who want to save books memorize them, so that the books won't be forgotten. For example, an old man who has memorized the novel *The Call of the Wild* helps a young boy memorize it by reciting the story to him. In this way, the book is saved for the future.

If you were told that you could save just one book for future generations, which book would you choose?

Write an essay in which you discuss which book you would choose to save for future generations and what it is about the book that makes it important to save. Be sure to discuss in detail why the book is important to you and why it would be important to future generations.

Table 4.22 Percentage scored "Uneven" or better for informative writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
82	48	91	99	•••

••• Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses often presented quite limited information about books chosen for discussion. The response below presents a very brief description and a series of unsupported abstractions about *To Kill a Mockingbird*. Some statements seem unrelated, making the response disjointed. The "Uneven" or better rating was given to 82 percent of the responses to this task. These responses map at the scale score 116.

The book that I would save for future generations is "To Kill a Mockingbird". I think that is one of my all time favorite books that I have read. It focuses on the prejudice that was & still exists to some degree in this country. I think children in the future should know about the past & the trials & tribulations people have gone through to get our society to how it is now. This is the perfect example of a struggle & what it took to deal with it. Although the story may not end the way you want it to, the book still portrays a step taken to make us that much better of a country. Little things sometime make a world of difference.

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Table 4.23 Percentage scored "Skillful" or better for informative writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
17	#	11	46	***

Percentage rounds to zero.
*** Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" responses often included extensive information and organized the information quite well, with occasional lapse in continuity. The sample response shown below develops a focused discussion about *The Joy Luck Club* using many pertinent details about the book. The few errors do not interfere with understanding; however, occasionally awkward sentence structure and a bit of repetition about the importance of experience weaken the response. The "Skillful" or better rating was given to 17 percent of the responses to this task and such responses map at the scale score 211.

If I had to choose just one book to memorize and pass on to all the generations to follow, I would pick The Joy Luck Club by Amy Tan.

Although it is the story of the relationships between a group of Chinese immigrants and their daughters, I believe it is a book that anyone any could relate to and should hear about. This is especially true in the U.S., where we are all immigrants or relatives of immigrants.

The relationships that evolve throughout the novel tell a very powerful story about differences. There are the adults, who came to California from a scary, sometimes cruel, world in China, where freedom was unheard of; then there are the first generation of children, who don't understand their parents' plights and are torn between who their parents want them to be and who they are becoming.

This novel leaves a lot to be learned and understood about relationships, especially mother-daughter relationships and generational relationships. These

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relationships affected everyone, as is true for real-life relationships. Part of the reason for the realness of this story is probably that Ms. Tan spoke from a lot of her own experience, and the experiences of others is very important for all the generations to come to learn about and hear about, so that, even if they can't root it in their own experience, they can still possibly learn something about themselves that they didn't know was there and most certainly can learn something about this country and what makes it such a unique and special place to live.

The Joy Luck Club is about learning how to live in a new place, in a new culture and the difficulties of trying to relate to kids who know nothing, or very little, of that old place + culture that means so much. It's a great story that anyone should be able to appreciate and enjoy. The difficulties all the characters had to face were remarkable, and quite interesting to watch bloom.

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Table 4.24 Percentage scored "Excellent" for informative writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
4	#	1	12	•••

Percentage rounds to zero.
••• Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses were well developed throughout with sentence variety and good word choice. The "Excellent" response shown below, about Herman Hesse's *Demian*, is well developed and has strong transitions. Well-chosen details and precise word choices support a sustained controlling idea: that teens can learn from the main character's coming of age. The "Excellent" rating was given to 4 percent of the responses to this task. "Excellent" responses map at the scale score 255.

Creating a literary masterpiece is most likely every writer's dream. German writer Hermain Hesse did so when he wrote Demian, the story of one boy's coming of age.

Although this novel is not necessarily a blatant American classic, it does have many powerful traits and deserves to be read by any highschooler. In the sense of literary analysis, the novel is an excellent example of Jungian psychology, and serves to chronicle a boy named Emil Sinclair's individuation, or the process of finding out who he is. High school is a wonderful time of self-discovery, where teens bond with several groups of friends, try different foods, fashions, classes, and experiences, both good and bad. The end result in May of senior year, is a mature and confident adult, ready to enter the next stage of life. Since Sinclair is going through much of what an average student might (troubles at school, falling in love) relating with

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and learning from Sinclair is an important aspect of the novel. The novel speaks of two realms: the dark half and the good half, and Sinclair's early "loss of innocence" by stealing a few coins from his mother. Many students feel disheartened by the sudden realization that they are no longer children, and long for the ignorance and bliss of innocent childhood. Reading about Sinclair's journey through the good and bad realms prepares students for the imminent good and bad experiences in life, and provides them with a hope for the future: that such experiences will leave them a mature and well-rounded adult, full of wisdom and compassion.

If one were to rid the world of books, Demian should be saved because of its profound impact on its readers. It is said that a book is a classic if people continue to read it decades after it is written. I see a classic as nothing more than a literary jewel, polished until society can gaze into it and see a perfect glimpse of itself.

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Grade 12 Sample Persuasive Task and Student Responses

Grade 12

Persuasive: *Heroes*

For this task, students are required to make an argument about who they think are the true heroes of our society. The task frames the topic in terms of media focus on celebrities versus the average person. Many students chose to discuss everyday people who perform heroic acts, whether family or community members or firefighters and police officers. Responses to this task were rated according to the 6-level, grade 12 persuasive scoring guide.

Who are our heroes? The media attention given to celebrities suggests that these people are today's heroes. Yet ordinary people perform extraordinary acts of courage every day that go virtually unnoticed. Are these people the real heroes?

Write an essay in which you define heroism and argue who you think our heroes really are—mass-media stars, ordinary people, or maybe both. Be sure to use examples of specific celebrities, other people you have heard or read about, or people from your own community to support your position.

Table 4.25 Percentage scored "Uneven" or better for persuasive writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Uneven" or better			
Overall percentage "Uneven" or better	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
88	60	96	100	***

*** Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Uneven" Response

"Uneven" responses took a clear position and offered support; but, that support was often lacking in development. This response also has some typical "Uneven" grammatical errors, inaccurate word choices, and some minor difficulties with sentence structure that occasionally interfere with understanding. The "Uneven" or better rating was given to 88 percent of the responses to this task and these responses map at the scale score 108.

I feel that celebrities are hero as well so are regular people like you and me. The reason for the statement before is because we as a whole look up to both.

The reason we look up to celebritos is because they are the ones that do things that we (normal people) only dream of doing. Let's just face it there are only some things you can do if you are a celebritie or rich. Some examples are playing professional sport or being a Runway model, or be an actor.

On the other hand we look up at people we see everyday. I think this is because we can relate to them more. We look up to the fire fighters, police officers and rescue workers of 9/11 and they are our moms, dads, brothers, sisters, aunts & uncles.

It does not matter who it is we look up to it is what they did for us to look up to them. Do not look up at some one just because they our famous do it for what they did.

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Table 4.26 Percentage scored "Skillful" or better for persuasive writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Skillful" or better			
Overall percentage "Skillful" or better	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
31	1	24	75	•••

••• Sample size is insufficient to permit a reliable estimate.

[1] NAEP writing composite scale range.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Skillful" Response

"Skillful" responses took clear positions and supported them with reasons or examples in parts of the response. The response shown below supports a clear position with pertinent examples (such as the friend's grandmother) in much of the response. The paper is well organized overall, but does not consistently exhibit well-executed sentence variety or good word choices. The "Skillful" or better rating was given to 31 percent of the responses to this task. "Skillful" responses map at the scale score 187.

A hero is not a hero because of fame. Real heroes do not do heroic things for recognition, but because they are loving, compassionate, and courageous people. Heroes do not even have to do specefic actions, they just have to be a model and admirable person.

I know of one woman who embodies heroism. She is my friends grandmother. My friend lost her father and has a disabled mother. Her grandmother has raised my friend and her brother. She has done so with enthusiasm while doing so many other acts of love. She actively does excessive amounts of charity work, while never failing to miss one of my friends softball games. At the elderly age of 70, she has raised two teenagers who are on my list of the most well-rounded people I know. She has done so with an immeasurable heart and practically on her own. Not to mention, she devotingly takes care of her disabled daughter.

The slam dunk of Michael Jordan does not compare with the courage and strength of my friends grandmother. Just because celebrities are able to

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be regonized nationally, does not make Ordinary people any less heroic. Regular people deal with real life more common situations. Their strength to fronts real life problems make them models for society. Celebritiqs cannot be my heroes because I cannot relate to their living situations. Ordinary people who tackle the same obstacles I face and reach out to others with love are my heroes. Regular people who top the charts with compassion do so with modesty. Celebrities are publically praised for their acts of kindness. Heroes are the people who do goods things because they want to not because they need to be recognized.

Our world's greatest heroes are the ordinary people who love unconditionally. Wealth does not make a person have admirable traits. Heroes need not be well-known, just well-rounded.

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Table 4.27 Percentage scored "Excellent" for persuasive writing task, by achievement level range, grade 12: 2002

Grade 12

	Percentage "Excellent"			
Overall percentage "Excellent"	Below *Basic* 121 or below[1]	At *Basic* 122–177[1]	At *Proficient* 178–229[1]	At *Advanced* 230 or above[1]
9	#	3	27	•••

Percentage rounds to zero.
••• Sample size is insufficient to permit a reliable estimate.
[1] NAEP writing composite scale range.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Sample "Excellent" Response

"Excellent" responses offered consistent support for their positions in the form of well-chosen reasons and examples. In the sample response below, the writer uses the strategy of question/answer to advance and maintain the focus of his or her argument (e.g., "So, what about the sports stars we call heroes?"). The response is also outstanding in its consistent variety in sentence structure and precise word choices. The "Excellent" rating was given to 9 percent of the responses to this task. "Excellent" responses map at the scale score 231.

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In most cultures, actions speak louder than words. What you do effects how people view you and what roads you will take in life (talk is cheap). In the world today those who 'walk the walk', are often looked upon as being a hero of some sort. But what is a hero? In my definition, a hero is someone who, regardless of words, when it all comes down to it, acts in a way to help others. (¶ One of the best living definitions of this word, were found in the streets of New York City, September 11th.)

without the thought a reward in mind

(¶ After the World Trade Center buildings collapsed, fire and rescue crews swarmed the scene to help injured and trapped victims. They worked night and day for 2 weeks searching, rescuing, and saving those who were involved in this incident. But for what? Was it the drive to get paid that caused them to go help these people? Or perhaps it was the fame they would get in later months and years

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at various sporting events and dinners. Both are wrong. They did it because they had to; it was what the human spirit inside of them told them to do. Now, sports announcers find other names to use for "heros" of the field because the name hero has already been filled with the firefighters and police officers who helped and gave their lives to helping others.

So, what about the sports stars we call heros? They make a million dollars a year to play a game and we call them heros. Why? Because what they do? What do they do that is so heroic? Amazing, possibly. Talented, most definately, but heroic? I think not. Americans throw around the word hero too much that it doesn't have meaning after a while. Credit is often not given to those whom it is due.

As short handed as they are, Americas teachers should be the ultimate heros They bust their butts all day every day to educate the youth of America. And it's not for the pay. I can guarantee that.

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Teachers enjoy educating and inspiring young adults to be better people. Smarter people. They fit the definition as well. They act in such a way as to help others without a reward in mind.

A hero helps others regardless of the reward or punishment. Many Americans don't realize the influence 'real' heros have on th-s- other nations needs to rethink its definition of "hero".

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Maps of Selected Tasks on the NAEP Writing Scale—Grades 4, 8, and 12

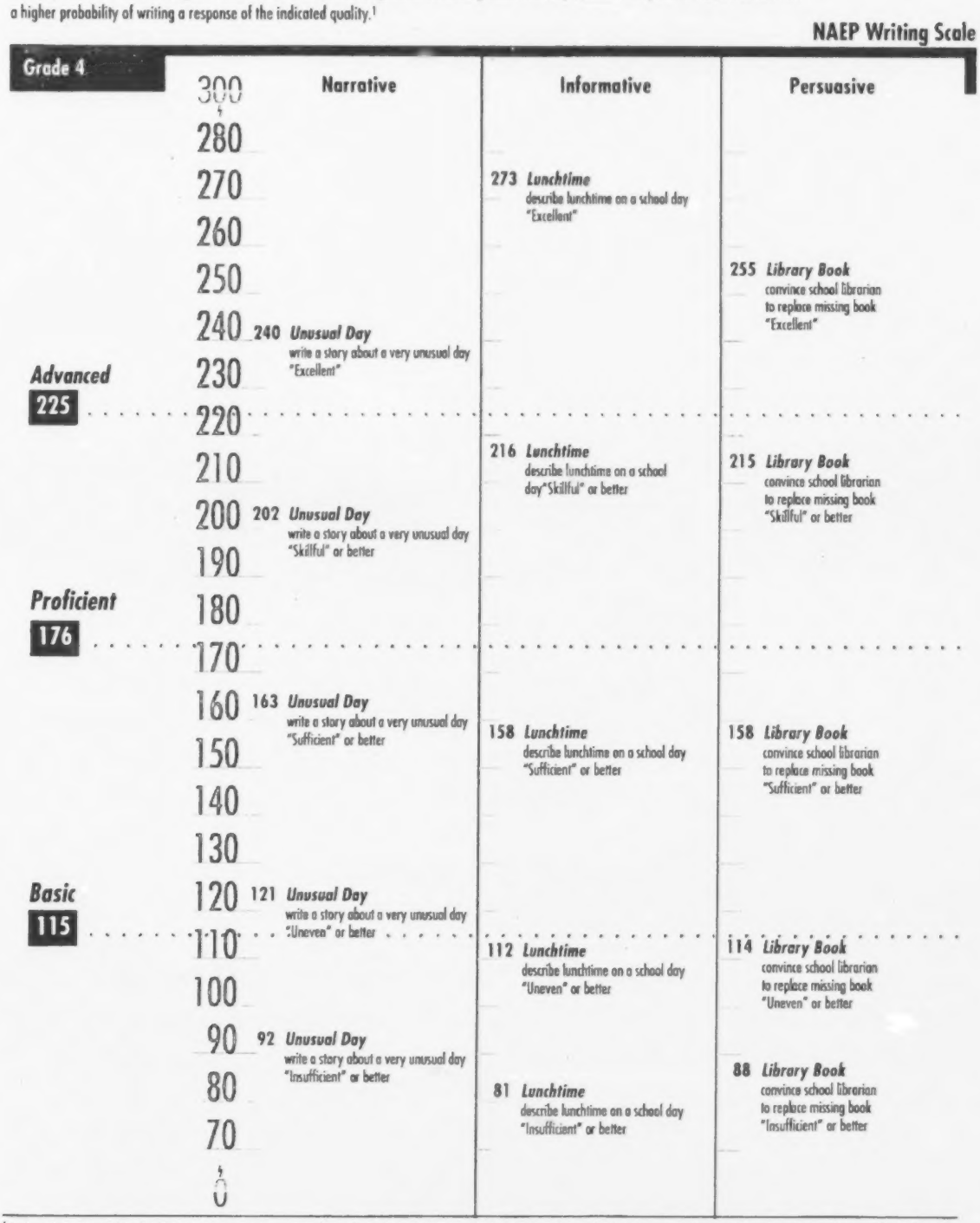
One way to interpret the meaning of the 0–300 writing scale is to show how students at different points on the writing scale are likely to perform on selected writing tasks. For the previously discussed tasks, the item maps on the following pages show the point on the writing scale at which students are likely to attain a particular rating on the 6-level scoring guide (scores for the "Unsatisfactory" level are not mapped). The cut scores for *Advanced, Proficient,* and *Basic* shown on the left side of each map indicate where students who receive a particular rating are likely to fall in relation to the three achievement levels.

An example of how the item maps present information may be helpful. Figure 4.1 shows the item map for three fourth-grade tasks. For the narrative task *Unusual Day*, those with writing scores at or above 202 on the scale were likely to write responses that were rated "Skillful" or better. For the informative task *Lunchtime*, those with writing scores at or above 216 were likely to write responses that were rated "Skillful" or better.

For each writing task indicated on the map, students who scored above a given scale point had a higher probability of receiving that rating or higher, while students who scored below that scale point had a lower probability of doing so. The map indicates the point at which at least 65 percent of students were likely to have the indicated rating for a given task. Although students above a given scale point for a given task had a higher probability of receiving a higher rating for that task, it does not mean that every student at or above that point always received a higher rating, nor does it mean that students below that point always received a lower rating. The item maps are useful indicators of higher or lower probabilities of responding to a task at a higher or lower level depending on students' overall ability as measured by the NAEP scale.

For each purpose for writing (narrative, informative, or persuasive), the item maps on the following pages provide the selection of tasks discussed earlier in this chapter, along with a brief description of each task, mapped at the point at which students are considered to have the skill to write a response of the indicated quality. Figures 4.1 through 4.3 present item maps for grades 4, 8, and 12 respectively.

Figure 4.1 Map of selected writing tasks on the NAEP writing scale, by purpose for writing, grade 4: 2002
This map describes the knowledge or skill associated with answering individual writing tasks. The map identifies the point at which students had a higher probability of writing a response of the indicated quality.[1]



[1] Each grade 4 writing task in the 2002 writing assessment was mapped onto the NAEP 0–300 writing scale. The map shows, for each level on the scoring guide from 2 ("Insufficient") through 6 ("Excellent"), the scale score attained by students who had a 65 percent probability of attaining that level or higher on the scoring guide. Only selected tasks are presented. Scale score ranges for writing achievement levels are referenced on the map.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Figure 4.2 Map of selected writing tasks on the NAEP writing scale, by purpose for writing, grade 8: 2002

This map describes the knowledge or skill associated with answering individual writing tasks. The map identifies the score point at which students had a higher probability of writing a response of the indicated quality.[1]

[1] Each grade 8 writing task in the 2002 writing assessment was mapped onto the NAEP 0–300 writing scale. The map shows, for each level on the scoring guide from 2 ("Insufficient") through 6 ("Excellent"), the scale score attained by students who had a 65 percent probability of attaining that level or higher on the scoring guide. Only selected tasks are presented. Scale score ranges for writing achievement levels are referenced on the map.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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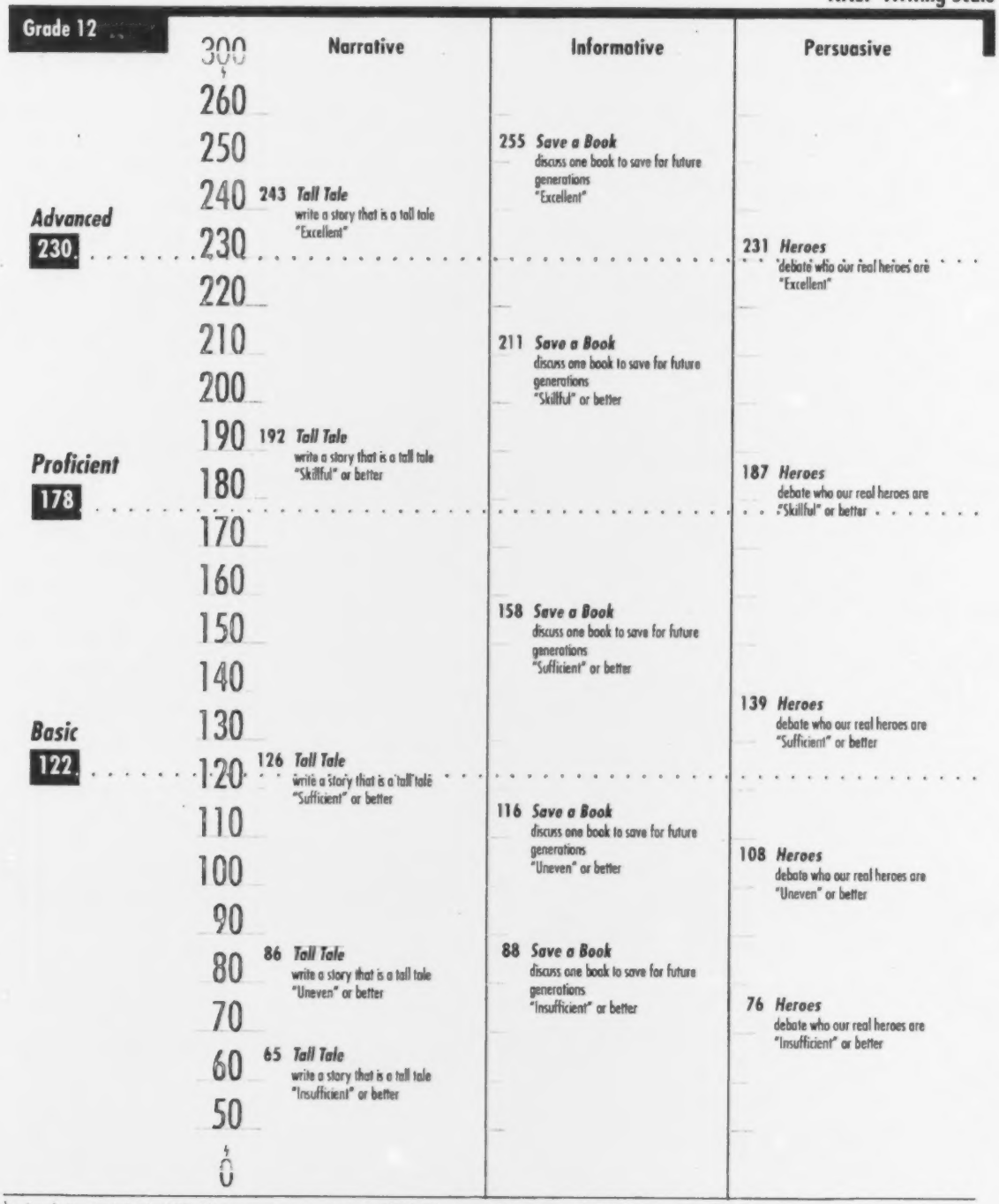
Figure 4.3 Map of selected writing tasks on the NAEP writing scale, by purpose for writing, grade 12: 2002
This map describes the knowledge or skill associated with answering individual writing tasks. The map identifies the score point at which students had a higher probability of writing a response of the indicated quality.[1]



[1] Each grade 12 writing task in the 2002 writing assessment was mapped onto the NAEP 0–300 writing scale. The map shows, for each level on the scoring guide from 2 ("Insufficient") through 6 ("Excellent"), the scale score attained by students who had a 65 percent probability of attaining that level or higher on the scoring guide. Only selected tasks are presented. Scale score ranges for writing achievement levels are referenced on the map.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Appendix A
Overview of Procedures Used for the NAEP 2002 Writing Assessment

This appendix provides an overview of the NAEP 2002 writing assessment's primary components—framework, development, administration, scoring, and analysis. A more extensive review of the procedures and methods used in the writing assessment will be included in the NAEP 2002 technical documentation section of the NAEP web site (http://nces.ed.gov/nationsreportcard).

The NAEP Writing Assessment

The NAEP 2002 writing assessment is based on the 1998 writing assessment framework.[1] The framework's purpose is to provide, based on the expert opinions of writing educators and researchers, a definition of writing upon which the NAEP writing assessment can be based. The framework development process involved the critical input of hundreds of individuals across the country, including representatives of national education organizations, teachers, parents, policymakers, business leaders, and the interested general public. The process was managed by the Center for Research on Evaluation, Standards, and Student Testing (CRESST) for the National Assessment Governing Board (NAGB), and the exercise specifications were developed under contract by American College Testing (ACT) for NAGB.

[1] National Assessment Governing Board. (2002). *Writing Framework for the 1998 National Assessment of Educational Progress.* Washington, DC: Author.

The writing framework delineates six major objectives to organize the design of the assessment.

- Students should write for three major purposes: narrative, informative, and persuasive. While other types of writing could have been included, the developers of the framework believed that, for the purpose of monitoring student achievement (as opposed to creating individual diagnostic assessments), three broad types of writing were appropriate.
- Students should be able to write on a variety of tasks (letters, essays, stories, reports) and for different audiences (peers, school or government officials, business representatives).
- Student writing should be prompted by a variety of stimulus materials (letters, poems, graphics, reports) under varying time constraints.
- Because writing is a dynamic process through which the writer constructs meaning, students should develop their own writing processes, including methods for drafting, evaluating, revising, and editing ideas and forms of expression. Students are to be given planning space in the test materials to generate ideas for drafts. In addition, they are given a pamphlet with suggestions for planning, revising, and editing. All NAEP student responses, given assessment time constraints, are to be evaluated as first drafts.
- Students should display effective choices in the organization of their writing. Further, they should be able to illustrate and elaborate their ideas and should use appropriate conventions of English. All of these characteristics are to be part of the evaluation of student writing.
- Students should value writing as a communicative activity.

Figure A.1 gives examples of various writing tasks similar to those included in the assessment at grades 4, 8, and 12. Included in the figure are descriptions of sample tasks that illustrate how each purpose for writing is assessed.

Figure A.1 Illustrative examples of writing tasks, by purpose for writing, grades 4, 8, and 12

Purpose for writing	Grade 4	Grade 8	Grade 12
Narrative	Provide visual stimuli of a season of the year. Ask students to write a letter to a grandparent telling the story of an interesting personal experience related to the season.	Provide visual stimuli. Ask students to write an article for a sports magazine telling the story of a time when they participated in a hobby or skill they enjoyed.	Provide an appropriate quotation. Ask students to write a letter to a friend telling the story of a time in their lives when they had to make an important decision.
Informative	Provide an appropriate quotation. Ask students to explain in an essay to their English teacher how a person (parent, teacher, friend) has influenced them in an important way.	Provide a series of brief journal entries from another historical time. Ask students to explain what is revealed about the person who wrote the entries.	Provide quotations from a political campaign. Ask students to choose one and in an essay inform their social studies teacher what it means in the context of the campaign.
Persuasive	Provide visual stimuli of an animal. Ask students to convince their parents/ guardians of an animal that would make the best pet.	Provide brief reviews, as models, of a film, TV program, or book. Ask students to write a review for the school newspaper that will convince other students to watch a favorite film or TV program or read a favorite book.	Provide a quotation on education in the United States. Ask students to write a letter to the editor of their local newspaper taking a position on some aspect of education and support it from their own experiences.

SOURCE: National Assessment Governing Board. *Writing Framework and Specifications for the 1998 National Assessment of Educational Progress.* Washington, DC: Author.

In addition to the six objectives, the framework specifies the percentage of the writing tasks in the assessment that should be devoted to each of the three writing purposes—narrative, informative, and persuasive. The actual percentage distributions of writing tasks in the assessment are listed in table 1.1 of chapter 1. The table shows the number of tasks at each grade level for each purpose. Each task received equal weight in the composition of the NAEP scale for each grade. These target percentages vary by grade level according to what is deemed developmentally appropriate for each grade, as stated in the writing framework.

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The Assessment Design

Each student who participated in the writing assessment received a booklet containing two 25-minute writing tasks. All student responses to the writing tasks were rated according to a six-level scoring guide. In addition, the test booklets contained general background questions and writing-specific background questions.

The assessment design allowed for maximum coverage of the writing domain at each grade, while minimizing the time burden for any one student. This was accomplished through the use of matrix sampling of tasks, in which each student was given only 2 of the 20 tasks at each grade level. Representative samples of students responded to each task, so that the aggregate results across the entire assessment allow broad reporting of writing abilities for the targeted population.

In addition to matrix sampling, the assessment design utilized a procedure for distributing blocks across booklets that controlled for position and context effects. Students received different blocks of tasks in their booklets according to a procedure called "partially balanced incomplete block (PBIB) spiraling." The procedure assigned blocks of questions in a manner that balanced the positioning of blocks across booklets and balanced the pairing of blocks within booklets according to purposes for writing. Blocks were balanced within each purpose for writing and were partially balanced across purposes for writing. (The spiraling aspect of this procedure cycles the booklets for administration so that, typically, only a few students in any assessment session receive the same booklets.)

In addition to the student assessment booklets, three other instruments provided data relating to the assessment—a teacher questionnaire, a school questionnaire, and a students with disabilities/limited English proficient student (SD/LEP) questionnaire. The SD/LEP questionnaire was completed by a school staff member knowledgeable about those students who were selected to participate in the assessment and who were identified as having an Individualized Education Program (IEP) or equivalent plan or being limited English proficient (LEP). An SD/LEP questionnaire was completed for each identified student regardless of whether the student participated in the assessment. Each SD/LEP questionnaire asked about the student and the special programs in which he or she participated.

NAEP Samples

National Sample

The national results presented in this report are based on nationally representative probability samples of fourth-, eighth-, and twelfth-grade students. At grades 4 and 8, the national sample consisted of the combined sample of students assessed in each participating state, plus an additional sample from the states that did not participate in the state assessment, as well as a private school sample. This represents a change from the 1998 assessment in which the national and state samples were independent. At grade 12, the sample was chosen using a stratified two-stage design that involved sampling students from selected schools (public and nonpublic) across the country.

Each selected school that participated in the assessment and each student assessed represents a portion of the population of interest. Sampling weights are needed to make valid inferences between the student samples and the respective populations from which they were drawn. Sampling weights account for disproportionate representation of students from different states, and students who attend nonpublic schools. Sampling weights also account for lower sampling rates for very small schools and are used to adjust for school and student nonresponse.[2]

Table A.1 provides a summary of the 2002 national school and student participation rates for the writing assessment sample. Participation rates are presented for public and nonpublic schools both individually and combined. Four different rates are presented; the first rate is a student-centered weighted percentage of schools participating in the assessment before substitution of demographically similar schools.[3] This rate is based only on the schools that were initially selected for the assessment. The numerator of this rate is the estimated number of students represented by the initially selected schools that participated in the assessment. The denominator is the estimated number of students represented by the initially selected schools that had eligible students enrolled.

The second school participation rate is a student-centered weighted participation rate after substitution. The numerator of this rate is the estimated number of students represented by the participating schools, whether originally selected or selected as a substitute for a school that chose not to participate. The denominator is the estimated number of students represented by the initially selected schools that had eligible students enrolled (this is the same as that for the weighted participation rate for the sample of schools before substitution). Because of the common denominators, the weighted participation rate after substitution is at least as great as the weighted participation rate before substitution.

The third school participation rate is a school-centered weighted percentage of schools participating in the assessment, before substitution of demographically similar schools. This rate is based only on the schools that were initially selected for the assessment. The numerator of this rate is the estimated number of schools represented by the initially selected schools that participated in the assessment. The denominator is the estimated number of schools represented by the initially selected schools that had eligible students enrolled.

The fourth school participation rate is a school-centered weighted participation rate after substitution. The numerator is the estimated number of schools represented by the participating schools, whether originally selected or selected as a substitute for a school that did not participate. The denominator is the estimated number of schools, represented by the initially selected schools that had eligible students enrolled.

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[2] Additional details regarding the design and structure of the national and state samples will be included in the technical documentation section of the NAEP web site at http://nces.ed.gov/nationsreportcard.

[3] The initial base sampling weights were used in weighting the percentages of participating schools and students. An attempt was made to preselect one substitute school for each sampled public school and one for each sampled Catholic school, and one for each sampled nonpublic school other than Catholic. To minimize bias, a substitute school resembled the original selection as much as possible in affiliation, type of location, estimated number of grade-eligible students, and minority composition.

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The student-centered and school-centered school participation rates differ if school participation is associated with the size of the school. If the student-centered rate is higher than the school-centered rate, this indicates that larger schools participated at a higher rate than smaller schools. The converse applies also.

Also presented in table A.1 are weighted student participation rates. The numerator of this rate is the estimated number of students who are represented by the students assessed (in either an initial session or a makeup session). The denominator of this rate is the estimated number of students represented by the eligible sampled students in participating schools.

For the grade 12 national sample, where school and student response rates did not meet NCES standards, an extensive analysis was conducted that examined, among other factors, the potential for nonresponse bias at both the school and student level. Results of these analyses, as well as nonresponse bias analyses for the grades 4 and 8 national samples, will be included in the technical documentation.

Table A.1 National school and student participation rates, by type of school, grades 4, 8, and 12: 2002

	School participation					Student participation	
	Student weighted		School weighted				
	Percentage before substitution	Percentage after substitution	Percentage before substitution	Percentage after substitution	Number of schools participating after substitution	Student weighted percentage	Number of students assessed
Grade 4							
Combined national	84	85	80	83	5,518	94	139,198
Public	85	85	84	85	5,067	94	132,753
Nonpublic	74	81	69	77	451	95	5,383
Grade 8							
Combined national	82	83	74	78	4,706	92	118,516
Public	83	84	80	81	4,208	91	112,485
Nonpublic	68	76	65	74	498	95	5,499
Grade 12							
Combined national	74	75	68	71	725	74	18,532
Public	76	76	73	74	443	72	14,291
Nonpublic	55	59	53	60	282	88	4,241

NOTE: The number of students in the combined national total at grades 4 and 8 includes students in the Department of Defense domestic schools located within the U.S. and Bureau of Indian Affairs schools that are not included as part of either the public or nonpublic totals.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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State Samples

The results provided in this report of the 2002 state assessment in writing are based on state-level samples of fourth- and eighth-grade public-school students. The samples were selected using a two-stage sample design that first selected schools within participating states and other jurisdictions and then students within schools. The samples were weighted to allow valid inferences about the populations of interest. Participation rates for jurisdictions were calculated the same way that rates were computed for the nation. Tables A.2 and A.3 contain the number of participating schools and students, as well as weighted school and student participation rates for the state samples at grades 4 and 8 respectively.

Table A.2 School and student participation rates, grade 4 public schools: By state, 2002

Grade 4	School participation			Student participation		Overall participation rate	
	Student weighted						
	Percentage before substitution	Percentage after substitution	Number of schools participating after substitution	Student weighted percentage	Number of students assessed	Before substitution	After substitution
Nation (Public)	85	85	5,067	94	132,753	80	80
Alabama	84	96	108	95	3,575	80	92
Arizona	91	91	105	91	3,073	83	83
Arkansas	99	99	107	94	2,779	93	93
California [1]	72	72	143	95	3,979	68	68
Connecticut	100	100	108	95	3,174	95	95
Delaware	100	100	86	94	3,950	94	94
Florida	100	100	103	95	3,210	95	95
Georgia	100	100	152	95	4,852	95	95
Hawaii	100	100	111	96	3,602	96	96
Idaho	87	87	98	95	2,722	82	82
Illinois [1]	57	57	117	93	3,053	53	53
Indiana	99	99	112	94	3,398	93	93
Iowa [1]	77	77	86	95	1,948	73	73
Kansas [1]	73	73	84	96	1,900	70	70
Kentucky	96	96	106	96	3,219	92	92
Louisiana	99	99	116	96	3,270	95	95
Maine	88	88	98	94	1,937	83	83
Maryland	100	100	105	93	2,791	93	93
Massachusetts	100	100	111	95	3,141	95	95
Michigan	98	99	110	92	2,970	90	91
Minnesota [1]	77	77	84	95	2,574	73	74
Mississippi	95	95	104	95	2,985	90	90
Missouri	94	100	113	94	2,963	89	94
Montana [1]	75	75	77	95	1,332	71	71
Nebraska	95	95	87	96	1,497	91	91
Nevada	100	100	113	93	3,474	93	93
New Mexico	93	93	104	94	2,348	87	87
New York [1]	77	77	90	91	2,370	70	70
North Carolina	100	100	113	94	3,366	94	94
North Dakota [1]	82	82	158	96	2,368	79	79
Ohio	95	95	107	93	2,688	89	89
Oklahoma	99	99	132	95	3,327	94	94
Oregon	85	88	100	94	2,614	80	83
Pennsylvania	100	100	114	94	3,336	94	94
Rhode Island	100	100	113	94	3,467	94	94
South Carolina	99	99	105	95	2,406	94	94
Tennessee [1]	78	78	91	96	2,930	75	75
Texas	89	89	139	95	3,609	84	84
Utah	100	100	111	94	3,645	94	94
Vermont	90	90	106	95	1,663	85	85
Virginia	100	100	109	95	3,115	95	95
Washington [1]	75	75	85	95	2,423	71	71
West Virginia	99	99	135	96	2,462	95	95
Wisconsin [1]	55	55	63	95	1,427	52	52
Wyoming	100	100	160	95	2,704	95	95
Other Jurisdictions							
District of Columbia	100	100	117	90	2,553	90	90
DDESS [1]	99	99	39	96	1,299	95	95
DoDDS [2]	99	99	91	95	2,850	94	94
Guam	100	100	25	96	1,191	96	96
Virgin Islands	100	100	24	95	707	95	95

[1] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table A.3 School and student participation rates, grade 8 public schools: By state, 2002

Grade 8	School participation			Student participation		Overall participation rate	
	Student weighted		Number of schools participating after substitution	Student weighted percentage	Number of students assessed	Before substitution	After substitution
	Percentage before substitution	Percentage after substitution					
Nation (Public)	83	84	4,208	91	112,485	76	77
Alabama	80	93	100	93	2,625	75	87
Arizona	93	93	110	88	2,456	82	82
Arkansas	99	99	103	91	2,556	90	90
California †	71	71	125	90	3,140	64	64
Connecticut	100	100	104	92	2,707	92	92
Delaware	100	100	35	90	3,903	90	90
Florida	100	100	105	91	2,706	91	91
Georgia	100	100	111	93	3,858	93	93
Hawaii	100	100	55	93	2,745	93	93
Idaho	86	86	80	93	2,455	80	80
Illinois †	56	56	106	90	2,416	51	51
Indiana	98	98	101	91	2,586	89	89
Kansas †	72	72	84	93	1,898	67	67
Kentucky	96	96	100	94	2,609	90	90
Louisiana	98	98	98	93	2,372	91	91
Maine	94	94	102	92	2,639	86	86
Maryland	93	93	99	90	2,467	84	84
Massachusetts	98	98	104	93	2,679	91	91
Michigan	98	98	104	88	2,450	86	86
Minnesota †	66	66	67	91	1,695	60	60
Mississippi	94	94	96	93	2,459	87	87
Missouri	92	96	114	91	2,620	84	88
Montana †	76	76	78	94	1,915	71	71
Nebraska	99	99	102	92	2,222	91	91
Nevada	100	100	65	88	2,582	88	88
New Mexico	93	93	91	92	2,389	86	86
New York †	71	71	84	88	1,971	63	63
North Carolina	100	100	106	93	2,698	93	93
North Dakota †	77	77	112	94	2,051	73	73
Ohio	96	96	94	90	2,337	87	87
Oklahoma	100	100	123	92	2,576	92	92
Oregon †	78	78	85	91	1,967	71	71
Pennsylvania	100	100	104	92	2,777	92	92
Rhode Island	100	100	55	89	2,608	89	89
South Carolina	97	97	99	93	2,220	90	90
Tennessee †	74	74	82	92	2,074	69	69
Texas	92	92	127	93	3,300	85	85
Utah	100	100	93	92	2,749	92	92
Vermont	91	91	99	92	2,414	84	84
Virginia	100	100	103	92	2,664	92	92
Washington †	74	74	80	90	1,879	66	66
West Virginia	92	92	97	92	2,312	85	85
Wisconsin †	66	66	75	92	1,814	61	61
Wyoming	100	100	82	92	2,598	92	92
Other Jurisdictions							
American Samoa	100	100	22	96	470	96	96
District of Columbia	100	100	36	85	1,734	85	85
DDESS [1]	99	99	14	96	733	94	94
DoDDS [2]	99	99	55	95	2,166	94	94
Guam	100	100	7	94	1,085	94	94
Virgin Islands	100	100	8	93	579	93	93

† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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District Samples

Results from the 2002 writing assessments will also be reported (on a trial basis) in a forthcoming report on district-level samples of fourth- and eighth-grade students in the large urban school districts that participated in the Trial Urban District Assessment. These large urban school districts are Atlanta, Chicago, Houston, Los Angeles, and New York. The sample of students in the urban school districts represents an augmentation of students who would "normally" be selected as part of state samples. These samples allow reliable subgroup reporting in these districts. Furthermore, all students at "lower" geographic levels are assumed to be part of "higher-level" samples. For example, Houston is one of the urban districts included in the Trial Urban District Assessment. Data from students tested in the Houston sample would be used to report results for Houston, and would also contribute to the Texas estimates and to the national calculations.

Standards for State Sample Participation and Reporting of Results

In carrying out the 2002 state assessment program, the National Center for Education Statistics (NCES) established participation rate standards that jurisdictions were required to meet in order for their results to be reported. NCES also established additional standards that required the annotation of published results for jurisdictions whose sample participation rates were low enough to raise concerns about their representativeness. The NCES guidelines used to report results in the state assessments, and the guidelines for notation when there is some risk of nonresponse bias in the reported results, are presented in this section.

Guideline 1

The publication of NAEP results

The conditions that will result in the publication of a jurisdiction's results are presented below.

Guideline 1 — Publication of Public School Results

A jurisdiction will have its public school results published in the 2002 NAEP writing report card (or in other reports that include all state-level results) if and only if its weighted participation rate for the initial sample of public schools is greater than or equal to 70 percent. Similarly, a jurisdiction will receive a separate NAEP State Report if and only if its weighted participation rate for the initial sample of public schools is greater than or equal to 70 percent.

Discussion: If a jurisdiction's public school participation rate for the initial sample of schools is below 70 percent, there is a substantial possibility that bias will be introduced into the assessment results. This possibility remains even after making statistical adjustments to compensate for school nonparticipation. There remains the likelihood that, in aggregate, the substitute schools are sufficiently dissimilar from the originals they are replacing and represent too great a proportion of the population to discount such a difference. Similarly, the assumptions underlying the use of statistical adjustments to compensate for nonparticipation are likely to be significantly violated if the initial response rate falls below the 70 percent level. Guideline 1 takes this into consideration. This guideline is congruent with current NAGB policy, which requires that data for jurisdictions that do not have a 70 percent before-substitution participation rate be reported "in a different format," and with the Education Information Advisory Committee (EIAC) resolution, which calls for data from such jurisdictions not to be published.

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The following guidelines concerning school and student participation rates in the NAEP state assessment program were established to address four significant ways in which nonresponse bias could be introduced into the jurisdiction sample estimates. The four significant ways include overall school nonresponse, strata-specific school nonresponse, overall student nonresponse and strata-specific student nonresponse. Presented on the following pages are the conditions that will result in a jurisdiction's receiving a notation in the 2002 reports. Note that in order for a jurisdiction's results to be published with no notations, that jurisdiction must satisfy all guidelines.

Guideline 2

Reporting school and student participation rates with possible bias due to school nonresponse

Guideline 2—Notation for Overall Public School Participation Rate

A jurisdiction that meets Guideline 1 will receive a notation if its weighted participation rate for the initial sample of public schools was below 85 percent and the weighted public school participation rate after substitution was below 90 percent.

Discussion: For jurisdictions that did not use substitute schools, the participation rates are based on participating schools from the original sample. In these situations, the NCES standards specify weighted school participation rates of at least 85 percent to guard against potential bias due to school nonresponse. Thus the first part of these guidelines, referring to the weighted school participation rate for the initial sample of schools, is in direct accordance with NCES standards.

To help ensure adequate sample representation for each jurisdiction participating in the NAEP 2002 state assessments, NAEP provided substitutes for nonparticipating public schools. For jurisdictions that used substitute schools, the assessment results will be based on the student data from all schools participating from both the original sample and the list of substitutes (unless both an initial school and its substitute eventually participated, in which case only the data from the initial school will be used).

The NCES standards do not explicitly address the use of substitute schools to replace initially selected schools that decide not to participate in the assessment. However, considerable technical consideration was given to this issue. Even though the characteristics of the substitute schools were matched as closely as possible to the characteristics of the initially selected schools, substitution does not entirely eliminate bias due to the nonparticipation of initially selected schools. Thus, for the weighted school participation rates including substitute schools, the guidelines were set at 90 percent.

If a jurisdiction meets either standard (i.e., 85 percent or higher prior to substitution or 90 percent or higher after substitution), there will be no notation for the relevant overall school participation rate.

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Guideline 3

Important segments of the jurisdiction's student population that must be adequately represented to avoid possible nonresponse bias

Guideline 3—Notation for Strata-Specific Public School Participation Rates

A jurisdiction that is not already receiving a notation under Guideline 2 will receive a notation if the sample of public schools included a class of schools with similar characteristics that had a weighted participation rate (after substitution) of below 80 percent, and from which the nonparticipating schools together accounted for more than 5 percent of the jurisdiction's total weighted sample of public schools. The classes of schools from each of which a jurisdiction needed minimum school participation levels were determined by degree of urbanization, minority enrollment, and median household income of the area in which the school is located.

Discussion: The NCES standards specify that attention should be given to the representativeness of the sample coverage. Thus, if some important segment of the jurisdiction's population is not adequately represented, it is of concern, regardless of the overall participation rate.

If nonparticipating schools are concentrated within a particular class of schools, the potential for substantial bias remains, even if the overall level of school participation appears to be satisfactory. Nonresponse adjustment cells for public schools have been formed within each jurisdiction, and the schools within each cell are similar with respect to degree of urbanization, minority enrollment, and/or median household income, as appropriate for each jurisdiction.

If the weighted response rate, after substitution, for a single adjustment cell falls below 80 percent, and more than 5 percent (weighted) of the sampled schools are nonparticipants from such a cell, the potential for nonresponse bias is too great. This guideline is based on the NCES standard for stratum-specific school response rates.

Guideline 4

Possible student nonresponse bias

Guideline 4—Notation for Overall Student Participation Rate in Public Schools

A jurisdiction that meets Guideline 1 will receive a notation if the weighted student response rate within participating public schools was below 85 percent.

Discussion: This guideline follows the NCES standard of 85 percent for overall student participation rates. The weighted student participation rate is based on all eligible students from initially selected or substitute schools who participated in the assessment in either an initial session or a make-up session. If the rate falls below 85 percent, the potential for bias due to students' nonresponse is too great.

Guideline 5

Possible nonresponse bias from inadequately represented strata

Guideline 5—Notation for Strata-Specific Student Participation Rates in Public Schools

A jurisdiction that is not already receiving a notation under Guideline 4 will receive a notation if the sampled students within participating public schools included a class of students with similar characteristics that had a weighted student response rate of below 80 percent, and from which the nonresponding students together accounted for more than 5 percent of the jurisdiction's weighted assessable public school student sample. Student groups from which a jurisdiction needed minimum levels of participation were determined by the age of the student, whether or not the student was classified as a student with a disability (SD) or limited English proficient (LEP), and the type of assessment session, as well as school level of urbanization, minority enrollment, and median household income of the area in which the school is located.

Discussion: This guideline addresses the fact that if nonparticipating students are concentrated within a particular class of students, the potential for substantial bias remains, even if the overall student participation level appears to be satisfactory. Student nonresponse adjustment cells have been formed using the school-level nonresponse adjustment cells, together with the student's age and the nature of the assessment session (unmonitored or monitored).

If the weighted response rate for a single adjustment cell falls below 80 percent, and more than 5 percent (weighted) of the invited students who do not participate in the assessment are from such a cell, the potential for nonresponse bias is too great. This guideline is based on the NCES standard for stratum-specific student response rates.

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At both the fourth and eighth grades, two states, Illinois and Wisconsin, did not meet the initial public-school participation rate of 70 percent. In addition, one state, Minnesota, did not meet this standard at the eighth grade. Results for these jurisdictions are not included with the findings reported for the state NAEP 2002 writing assessment.

Nine jurisdictions at grade 4 did not meet the second guideline for notation (i.e., the weighted participation rate for the initial sample of schools was below 85 percent and the weighted school participation rate after substitution was below 90 percent): California, Iowa, Kansas, Minnesota, Montana, New York, North Dakota, Tennessee, and Washington. At grade 8, eight jurisdictions did not meet this guideline: California, Kansas, Montana, New York, North Dakota, Oregon, Tennessee, and Washington. Results for each of these jurisdictions at the appropriate grade level are shown with a notation indicating possible bias related to nonresponse.

Students with Disabilities (SD) and/or Limited English Proficient (LEP) Students

It is NAEP's intent to assess all selected students from the target population. Therefore, every effort is made to ensure that all selected students who are capable of participating in the assessment are assessed. Some students sampled for participation in NAEP can be excluded from the sample according to carefully defined criteria. These criteria communicate a presumption of inclusion except under special circumstances. According to these criteria, students who had an Individualized Education Program (IEP) or were protected under Section 504 of the Rehabilitation Act of 1973[4] were to be included in the NAEP assessment except in the following cases:

- the school's IEP team determined that the student could not participate,
- the student's cognitive functioning was so severely impaired that she or he could not participate, or
- the student's IEP required that the student be tested with an accommodation or adaptation that NAEP does not allow and that the student could not demonstrate his or her knowledge without that accommodation.

All LEP students who received academic instruction in English for three years or more were to be included in the assessment. Those LEP students who received instruction in English for fewer than three years were to be included unless school staff judged them to be incapable of participating in the assessment in English.

Participation of SD and/or LEP Students in the NAEP Samples

Testing all sampled students is the best way for NAEP to ensure that the statistics generated by the assessment are as representative as possible of the performance of the entire national population and the populations of participating jurisdictions. However, all groups of students include certain proportions that cannot be tested in large-scale assessments (such as students who have profound mental disabilities) or who can only be tested through the use of testing accommodations such as extra time, one-on-one administration, or use of

[4] Section 504 of the Rehabilitation Act of 1973 is a civil rights law designed to prohibit discrimination on the basis of disability in programs and activities, including education, that receive federal financial assistance.

magnifying equipment. Some students with disabilities and some LEP students cannot show on a test what they know and can do unless they are provided with accommodations. When such accommodations are not allowed, students requiring such adjustments are often excluded from large-scale assessments such as NAEP. This phenomenon has become more common in the last decade and gained momentum with the passage of the 1997 Individuals with Disabilities Education Act (IDEA), which led schools and states to identify increasing proportions of students as needing accommodations on assessments in order to best show what they know and can do.[5] Furthermore, section 504 of the Rehabilitation Act of 1973 requires that, when students with disabilities are tested, schools must provide them with appropriate accommodations so that the test results accurately reflect students' achievement. In addition, as the proportion of limited English proficient students in the population has increased, some states have started offering accommodations, such as translations of assessments or the use of bilingual dictionaries as part of assessments.

Before 1996, NAEP did not allow any testing under nonstandard conditions (i.e., accommodations were not permitted). At that time, NAEP samples were able to include almost all sampled students in standard assessment sessions. However, as the influence of IDEA grew more widespread, the failure to provide accommodations led to increasing levels of exclusion in the assessment. Such increases posed two threats to the program: 1) they threatened the stability of trend lines (because excluding more students in one year than the next might lead to apparent rather than real gains), and 2) they made NAEP samples less than optimally representative of target populations.

The reporting samples in the 1998 and 2002 writing assessments used these criteria with provisions made for accommodations. Students with disabilities or limited English proficient students were given accommodations that matched as closely as possible those provided to them in other testing situations by their schools or instructors (most frequently, extended time for responding). All the scale score and achievement level information in this report, then, is based on a student sample that includes students who were provided with accommodations. The responses of students assessed with accommodations were evaluated according to the same criteria as those of students assessed without accommodations.

In order to make it possible to evaluate both the impact of increasing exclusion rates in some jurisdictions and differences between jurisdictions, complete data on exclusion in all years are included in this appendix. Since the exclusion rates may affect trend measurement within a jurisdiction, readers should consider the magnitude of exclusion rate changes when interpreting score changes in jurisdictions. In addition, different rates of exclusion may influence the meaning of state comparisons. Thus, exclusion data should be reviewed in this context as well.

[5] Office of Special Education Programs. (1997). *Nineteenth Annual Report to Congress on the Implementation of the Individuals With Disabilities Education Act.* Washington, DC: U. S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics.

Percentages of SD and/or LEP students for the 1998 and 2002 national sample are presented in table A.4. The data in this table include the percentage of students identified as SD and/or LEP, the percentage of students excluded, the percentage of assessed SD and/or LEP students, the percentage assessed without accommodations, and the percentage assessed with accommodations. Table A.4 also includes similar data for SD students only and LEP students only. Tables A.5 and A.6 show similar information by jurisdiction for grade 4 and grade 8. Table A.5 shows 2002 data only since the 1998 state assessments were administered only at grade 8.

In the 2002 national sample, 5 percent of students at grade 4, 4 percent of students at grade 8, and 3 percent of students at grade 12 were excluded from the assessment (See table A.4). Across the various jurisdictions that participated in the 2002 state assessment, the percentage of students excluded ranged from 2 to 10 percent at grade 4 (see table A.5) and from 1 to 8 percent at grade 8 (see table A.6).

Table A.4 Students with disabilities and/or limited English proficient students identified, excluded, and assessed, grades 4, 8, and 12: 1998 and 2002

	1998		2002	
	Number of students	Weighted percentage of all students sampled	Number of students	Weighted percentage of all students sampled
Grade 4				
SD[1] and/or LEP[2] students				
Identified	3,621	15	26,998	19
Excluded	1,450	5	7,608	5
Assessed	2,171	10	19,390	14
Without accommodations	1,425	6	11,281	9
With accommodations	746	4	8,109	5
SD[1] students				
Identified	2,192	11	19,052	12
Excluded	806	4	5,603	4
Assessed	1,386	7	13,449	8
Without accommodations	744	4	6,153	4
With accommodations	642	3	7,296	4
LEP[2] students				
Identified	1,582	4	9,923	8
Excluded	753	2	2,878	2
Assessed	829	2	7,045	7
Without accommodations	709	2	5,777	6
With accommodations	120	#	1,268	1
Grade 8				
SD[1] and/or LEP[2] students				
Identified	2,935	13	20,516	17
Excluded	877	4	5,012	4
Assessed	2,058	9	15,504	13
Without accommodations	1,380	6	8,877	8
With accommodations	678	3	6,627	5
SD[1] students				
Identified	2,139	10	16,420	12
Excluded	672	3	3,958	3
Assessed	1,467	7	12,462	9
Without accommodations	863	5	6,250	5
With accommodations	604	3	6,212	5
LEP[2] students				
Identified	924	3	5,526	6
Excluded	273	1	1,554	1
Assessed	651	2	3,972	4
Without accommodations	561	2	3,211	4
With accommodations	90	#	761	1

See footnotes at end of table. ▶

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Table A.4 Students with disabilities and/or limited English proficient students identified, excluded, and assessed, grades 4, 8, and 12: 1998 and 2002—Continued

Grade 12	1998 Number of students	1998 Weighted percentage of all students sampled	2002 Number of students	2002 Weighted percentage of all students sampled
SD[1] and/or LEP[2] students				
Identified	1,975	8	2,120	11
Excluded	658	2	754	3
Assessed	1,317	6	1,366	8
Without accommodations	991	5	919	6
With accommodations	326	1	447	3
SD[1] students				
Identified	1,375	6	1,654	9
Excluded	566	2	674	3
Assessed	809	4	980	6
Without accommodations	536	3	574	4
With accommodations	273	1	406	3
LEP[2] students				
Identified	654	2	591	3
Excluded	122	#	146	1
Assessed	532	2	445	2
Without accommodations	474	2	389	2
With accommodations	58	#	56	#

Percentage rounds to zero.
[1] Students with disabilities.
[2] Limited English proficient students.
NOTE: Within each grade level, the combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions, because some students were identified as both SD and LEP. Such students would be counted separately in the bottom portions, but counted only once in the top portion.
Within each portion of the table, percentages may not add to totals due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table A.5 Percentage of students with disabilities and/or limited English proficient students identified, excluded, and assessed, grade 4 public schools: By state, 2002

Grade 4	2002					
	SD[1] and/or LEP[2] students					
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations	All students assessed without accommodations
Nation (Public)	20	5	15	10	5	89
Alabama	14	2	12	9	3	95
Arizona	28	6	22	19	3	90
Arkansas	15	3	12	7	5	92
California	35	4	30	29	2	94
Connecticut	16	5	11	5	6	89
Delaware	17	6	11	4	8	86
Florida	24	6	19	9	10	84
Georgia	14	3	11	5	5	91
Hawaii	18	4	15	8	7	90
Idaho	18	2	16	10	6	92
Illinois	20	6	14	7	7	87
Indiana	13	4	10	6	3	93
Iowa	16	5	11	3	8	87
Kansas	20	3	17	6	10	86
Kentucky	11	6	5	3	2	92
Louisiana	19	4	15	4	12	84
Maine	18	5	13	6	7	88
Maryland	15	7	7	6	2	91
Massachusetts	19	5	14	3	11	84
Michigan	13	5	8	5	3	91
Minnesota	19	4	14	9	5	91
Mississippi	7	4	3	2	1	95
Missouri	16	5	11	4	7	88
Montana	14	4	10	4	5	91
Nebraska	19	3	16	9	7	90
Nevada	26	8	19	13	6	87
New Mexico	37	7	30	21	8	84
New York	19	7	12	4	8	85
North Carolina	19	7	12	3	9	84
North Dakota	17	3	13	8	6	91
Ohio	12	7	5	3	2	91
Oklahoma	19	3	15	9	6	91
Oregon	24	6	17	12	6	88
Pennsylvania	14	4	10	4	6	91
Rhode Island	23	4	19	8	11	85
South Carolina	17	5	12	9	4	92
Tennessee	15	3	12	9	3	94
Texas	26	10	16	13	2	87
Utah	20	4	17	11	6	90
Vermont	15	5	11	3	8	88
Virginia	19	6	13	5	8	86
Washington	14	3	11	6	5	92
West Virginia	15	5	10	4	6	89
Wisconsin	19	7	11	5	6	86
Wyoming	16	2	14	6	8	90
Other Jurisdictions						
District of Columbia	19	6	12	6	6	87
DDESS [3]	17	3	14	8	6	91
DoDDS [4]	16	3	13	9	4	93
Guam	38	4	34	27	7	90
Virgin Islands	8	4	5	3	1	95

[1] Students with disabilities
[2] Limited English proficient students
[3] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[4] Department of Defense Dependents Schools (Overseas).
NOTE: Percentages may not add to totals due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table A.6 Percentage of students with disabilities and/or limited English proficient students identified, excluded, and assessed, grade 8 public schools: By state, 1998 and 2002

Grade 8	1998						2002					
	SD[1] and/or LEP[2] students					All students assessed without accommodations	SD[1] and/or LEP[2] students					All students assessed without accommodations
	Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations		Identified	Excluded	Assessed	Assessed without accommodations	Assessed with accommodations	
Nation (Public)	14	4	10	7	3	93	18	4	14	8	5	90
Alabama	12	6	6	5	1	93	15	3	12	11	1	96
Arizona	17	5	12	10	2	92	22	5	17	14	3	92
Arkansas	13	6	7	5	1	93	17	3	14	9	5	92
California	23	6	17	15	2	92	27	3	24	20	3	93
Colorado	13	4	9	6	3	93	—	—	—	—	—	
Connecticut	15	7	8	5	3	90	17	4	13	7	6	90
Delaware	14	3	11	8	3	94	15	5	11	2	8	87
Florida	16	5	11	9	2	93	20	4	16	7	10	87
Georgia	11	5	7	4	2	93	13	3	10	5	5	92
Hawaii	15	4	11	8	3	93	21	3	18	11	7	90
Idaho	—	—	—	—	—		14	2	13	8	4	94
Illinois	12	4	8	6	2	94	18	3	14	8	7	90
Indiana	—	—	—	—	—		13	3	10	7	3	94
Kansas	—	—	—	—	—		16	3	13	6	7	90
Kentucky	10	2	7	3	4	93	11	4	8	4	3	93
Louisiana	13	5	8	3	5	90	16	4	12	4	8	88
Maine	14	5	8	5	3	92	18	2	16	8	8	90
Maryland	13	2	11	4	7	91	16	4	12	9	3	93
Massachusetts	17	5	12	7	5	90	20	3	16	7	10	87
Michigan	—	—	—	—	—		14	5	9	4	4	90
Minnesota	14	3	11	8	3	94	17	3	14	9	5	92
Mississippi	9	5	5	4	1	94	10	5	5	3	2	93
Missouri	13	3	10	6	4	93	16	3	13	4	9	88
Montana	11	2	9	6	2	95	13	2	12	7	4	94
Nebraska	—	—	—	—	—		17	4	12	7	5	91
Nevada	16	6	10	8	3	91	21	4	16	12	5	91
New Mexico	23	6	17	14	3	90	32	5	27	17	10	85
New York	15	5	9	3	6	89	20	6	14	5	9	85
North Carolina	14	4	10	4	6	89	17	5	12	4	9	87
North Dakota	—	—	—	—	—		15	1	14	8	6	93
Ohio	—	—	—	—	—		12	6	7	4	2	92
Oklahoma	13	9	5	4	1	90	16	2	14	9	4	93
Oregon	15	3	12	9	3	94	18	4	14	11	3	93
Pennsylvania	—	—	—	—	—		14	2	12	4	8	90
Rhode Island	17	4	13	10	3	93	22	3	18	9	10	87
South Carolina	12	5	7	5	2	93	15	5	10	6	4	91
Tennessee	13	4	9	8	1	95	14	3	12	10	2	95
Texas	19	6	13	10	2	92	19	7	13	11	2	92
Utah	10	4	6	5	1	95	17	3	14	9	4	93
Vermont	—	—	—	—	—		17	4	14	6	7	89
Virginia	14	4	9	6	3	93	18	6	12	5	7	87
Washington	13	4	9	7	3	94	15	3	11	6	5	91
West Virginia	14	5	9	5	3	92	18	4	14	5	9	86
Wisconsin	11	4	7	4	3	93	17	4	13	4	9	87
Wyoming	9	2	7	5	2	96	15	2	13	6	7	91
Other Jurisdictions												
American Samoa	—	—	—	—	—		22	7	15	9	6	87
District of Columbia	13	6	7	6	1	92	21	6	15	5	10	84
DDESS [3]	10	3	7	4	3	94	15	3	12	5	7	90
DoDDS [4]	7	1	6	4	2	97	10	1	8	6	3	96
Guam	—	—	—	—	—		31	1	30	27	3	95
Virgin Islands	8	8	#	#	0	92	10	8	2	2	#	92

— Indicates that the jurisdiction did not participate.

Percentage rounds to zero.

[1] Students with disabilities [2] Limited English proficient students

[3] Department of Defense Domestic Dependent Elementary and Secondary Schools. [4] Department of Defense Dependents Schools (Overseas).

NOTE: Percentages may not add to totals due to rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Investigating the Potential Effects of Exclusion Rates on Assessment Results

Variation in the rates of exclusion of students with disabilities and limited English proficient students introduces validity concerns for comparisons over time or between jurisdictions. The essential problem is the differential representativeness of samples, which could impact the comparability of cross-state comparisons within a given year and state trends across years. Since students with disabilities or limited English proficient students tend to score below average on assessments, excluding students with special needs may increase a jurisdiction's scores. Conversely, including more of these students might depress score gains. In 2002, exclusion rates varied among jurisdictions. In addition, cases of both increases and decreases in exclusion rates occurred between 1998 and 2002, making comparisons over time within jurisdictions complex to interpret. Tables A.5 and A.6 on the preceding pages display the rates of exclusion in each jurisdiction for grade 4 in 2002 and for grade 8 in 2002 and 1998, respectively.

As shown in table A.5, of the 48 jurisdictions that assessed writing at grade 4 in 2002, all jurisdictions except Texas had exclusion rates of less than 10 percent, and more than two-thirds had exclusion rates of less than six percent. Table A.6 displays the comparable data for grade 8. In 2002, all jurisdictions had exclusion rates less than 9 percent and about three-quarters had exclusion rates of less than five percent. Exclusion rates in grade 8 increased from 1998 to 2002 in eight jurisdictions, with an average increase of 1.5 percentage points.

At least two factors contributed to the variability in exclusion rates across states. One factor is that the percentage of students who are *identified* as having disabilities or limited proficiency in English varies across jurisdictions and over time. Reasons for this variation include: 1) lack of standardized criteria for defining students as having specific disabilities or as being limited in their English proficiency; 2) changes or differences in policy and practices regarding implementation of the Individuals with Disabilities Education Act (IDEA); and 3) population shifts in the percentage of students classified as limited English proficient and, to a lesser extent, as students with disabilities.

Another factor is that some SD and/or LEP students are excluded because they are so severely disabled or lacking in English language skills that no accommodation would be sufficient to enable them to participate meaningfully.

With regard to cross-state comparisons, the correlations between rates of exclusion and average 2002 writing scores were not found to be significant at either grade 4 (.18) or grade 8 (-.33). In other words, higher exclusion rates were not associated with higher average scores in 2002. However, with regard to state trends, the correlations between changes in the rate of exclusion of students with special needs and average writing score gains from 1998 to 2002 were found to be moderate (.51 at grade 8). While there was a moderate tendency for an increase in exclusion rates to be associated with an increase in average scale scores, exclusion increases do not explain the entirety of score gains.

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Because the representativeness of samples is ultimately a validity issue, NCES has commissioned studies of the impact of assessment accommodations on overall scores. NCES has also investigated scenarios for estimating what the average scores might have been had the excluded students been assessed. Two alternative statistical scenarios have been proposed, based on different hypotheses about how excluded students might have performed. Combined with the actual performance of students who were assessed, these scenarios produce results for the full population (that is, including estimates for excluded students) in each jurisdiction and each assessment year. These techniques provide some indication as to which statements about trend gains or losses *might* be changed if exclusion rates were zero in both assessment years and if the hypotheses about the performance of missing students are correct.

One scenario was developed by Donald McLaughlin of American Institutes for Research, and predicts what the performance of excluded SD and/or LEP students might have been had these students been tested. The basic assumption underlying this approach is that these students would have performed as well as included SD and/or LEP students with similar disabilities, level of English proficiency, and background characteristics.[6] The scenario was performed for each jurisdiction that participated in both 1998 and 2002.

The other scenario was developed by Al Beaton of Boston College and similarly makes an assumption about what the performance of excluded SD/LEP students might have been had they been tested. The idea of Beaton's scenario is to calculate median, rather than average scores. A 'median' is the score reached or exceeded by fifty percent of the student population. This statistic is not influenced by extreme values. Beaton's assumption is that all SD/LEP students would score below *Basic* or below the median of the group being analyzed. This assumption lowers the median score for every group.

The methods used to construct the scenarios are still under development. NCES is continuing research into different procedures for reducing the percentages of students excluded from NAEP. In addition, NCES will continue to evaluate the potential impact of changes in exclusion rates on score gains. More detailed information on the scenarios will be available at the NAEP web site at http://www.nces.ed.gov/nationsreportcard. The scenarios illustrate the potential impact of reasonable hypotheses about the performance of excluded students on score gains in the jurisdictions that participated in both 1998 and 2002 and should not be interpreted as official results.

[6] Because students with very severe levels of disability and students with little or no proficiency in English are not assessed in NAEP, ability estimates for students with those characteristics may be overestimated.

Types of Accommodations Permitted

Table A.7 displays the percentages of SD and/or LEP students assessed with the variety of available accommodations. It should be noted that students assessed with accommodations typically received some combination of accommodations. The percentages presented in the table reflect only the primary accommodation provided. For example, students assessed in small groups (as compared with standard NAEP sessions of about 30 students) usually received extended time. In one-on-one administrations, students often received assistance in recording answers and were afforded extra time. Extended time was considered the primary accommodation only when it was the sole accommodation provided.

Table A.7 Students with disabilities and/or limited English proficient students assessed with accommodations, by type of primary accommodation, grades 4, 8, and 12 public and nonpublic schools: 1998 and 2002

	Weighted percentage of students sampled					
	Grade 4		Grade 8		Grade 12	
	1998	2002	1998	2002	1998	2002
SD[1] and/or LEP[2] students						
Bilingual dictionary	0.01	0.02	0.04	0.11	0.02	0.09
Large-print book	0.01	0.03	0.02	0.03	0.01	0.01
Extended time	0.76	1.52	0.82	1.84	0.45	1.35
Read aloud	0.28	0.31	0.08	0.27	0.04	0.16
Small group	2.31	3.08	1.61	2.62	0.67	1.07
One-on-one	0.23	0.13	0.12	0.11	0.07	0.06
Scribe/computer	0.17	0.02	0.05	0.02	0.04	0.02
Other	0.02	0.02	0.02	0.05	0.05	0.02
SD[1] students only						
Bilingual dictionary	#	#	#	0.01	#	#
Large-print book	0.01	0.03	0.02	0.03	0.01	0.01
Extended time	0.65	1.21	0.71	1.65	0.35	1.26
Read aloud	0.25	0.29	0.06	0.24	0.03	0.15
Small group	2.17	2.77	1.58	2.52	0.65	1.05
One-on-one	0.22	0.13	0.11	0.11	0.07	0.06
Scribe/computer	0.17	0.02	0.05	0.02	0.04	0.02
Other	0.02	0.02	0.02	0.05	0.05	0.02
LEP[2] students only						
Bilingual dictionary	0.01	0.02	0.04	0.11	0.02	0.09
Large-print book	#	#	#	#	#	#
Extended time	0.13	0.43	0.11	0.34	0.10	0.13
Read aloud	0.05	0.03	0.03	0.04	#	#
Small group	0.17	0.46	0.06	0.24	0.04	0.05
One-on-one	0.01	0.01	0.01	0.01	#	#
Scribe/computer	#	#	#	#	#	#
Other	#	0.01	#	0.01	#	#

Percentage rounds to less than 0.01.
[1] Students with disabilities.
[2] Limited English proficient students.
NOTE: The combined SD/LEP portion of the table is not a sum of the separate SD and LEP portions because some students were identified as both SD and LEP. Such students would be counted separately in the bottom portions but counted only once in the top portion.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Data Collection and Scoring

The writing assessment was conducted from January to March 2002. Data collection for the 2002 assessment was conducted by trained field staff from Westat.

Materials from the NAEP 2002 writing assessment were shipped to Pearson, where trained staff evaluated the responses to the writing tasks using scoring rubrics or guides prepared by ETS. All the writing tasks were evaluated according to six-level scoring guides. At each grade, scoring guides were developed for each of the three types of tasks: narrative, informative, and persuasive.

Specialists in writing who are highly experienced in teaching and/or assessing writing trained the professional raters who evaluated the student responses. The trainers received intensive training together that included reading a manual that explained how to use the scoring guides and the processes for training and checking raters. For each task, the trainer, in consultation with other trainers or assessment specialists, chose numerous sample responses to present to raters and prepared notes on how the scoring guide applied to the particular task. The sample responses helped raters become accustomed to the variety of responses the task elicited before they began rating the student responses. Raters had to pass a qualifying test before they could evaluate student responses: they had to agree with at least 70 percent of the ratings (to a set of ten student responses) that were given beforehand by their trainer.

In order to determine interrater reliability of scoring, a specified percentage of responses was read twice: two raters read 6 percent of the responses at grades 4 and 8 (grades at which the assessment data was collected from the combined sample), and 25 percent of responses at grade 12.

For the national and state writing assessments, 608,269 responses to writing tasks were scored. This number includes rescoring to monitor interrater reliability. The within-year average percentage of exact agreement of ratings on the six-level scoring guides for the 2002 reliability samples was 83 percent at fourth grade, 82 percent at eighth grade, and 78 percent at twelfth grade.

Data Analysis and IRT Scaling

Subsequent to the professional scoring, all information was transcribed into the NAEP database at ETS. Each processing activity was conducted with rigorous quality control. After the assessment information was compiled in the database, the data were weighted according to the population structure. The weighting for the combined sample reflected the probability of selection for each student as a result of the sampling design, adjusted for nonresponse.[7]

[7] Weighting procedures are described more fully in the "Weighting and Variance Estimation" section later in this document. Additional information about the use of weighting procedures will be included in the technical documentation section of the NAEP web site at http://nces.ed.gov/nationsreportcard.

Analyses were then conducted to determine the percentages of students who wrote responses to each writing task at each level on the scoring guide and who provided various responses to each background question. In calculating response percentages for each task, only students classified as having been presented the question were included in the denominator of the statistic. Students whose papers were blank or whose responses were judged to be off topic were similarly excluded from the calculation of the scale.

Item Response Theory (IRT) was used to estimate average writing scale scores for the nation, for various subgroups of interest within the nation, and for the states and other jurisdictions. IRT models the probability of answering a question in a certain way as a mathematical function of proficiency or skill. The main purpose of IRT analysis is to provide a common scale on which performance can be compared among groups such as those defined by characteristics, including gender and race/ethnicity.

The results for the 2002 writing assessments are presented on the NAEP writing scales. In 2002, a scale ranging from 0 to 300 was computed to report performance at each grade level. The scale summarizes student performance across all three purposes for writing (narrative, informative, and persuasive) in the assessment.

In producing the writing scale, an IRT model was used. The writing tasks (all rated according to six-level scoring guides) were scaled by use of a generalized partial-credit (GPC) model.[8] The GPC model permits the scaling of questions scored according to multipoint rating schemes. The model takes full advantage of the information available from each of the student response categories that are used for more complex constructed-response questions such as writing tasks.[9]

Because of the PBIB spiraling design used by NAEP, students do not receive enough writing tasks to provide reliable information about individual performance. Traditional test scores for individual students, even those based on IRT, would result in misleading estimates of population characteristics, such as subgroup means and percentages of students at or above a certain scale score level. However, it is NAEP's goal to estimate these population characteristics. NAEP's objectives can be achieved with methodologies that produce estimates of the population-level parameters directly, without the intermediary computation of estimates of individuals.[10] This is accomplished using marginal estimation scaling model techniques for latent variables. Under the assumptions of the scaling models, these population estimates will be consistent in the sense that the estimates approach the model-based population

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[8] Muraki, E. (1992). A Generalized Partial Credit Model: Application of an EM Algorithm. *Applied Psychological Measurement, (16)*2, 159–176.

[9] More detailed information regarding the IRT analyses used in NAEP will be included in the technical documentation section of the NAEP web site at http://nces.ed.gov/nationsreportcard.

[10] Mislevy, R. J., and Sheehan, K. M. (1987). Marginal Estimation Procedures. In A. E. Beaton (Ed.) Implementing the New Design: The NAEP 1983–1984 Technical Report (Report No. 15-TR-20). Princeton, NJ: Educational Testing Service.

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values as the sample size increases. This would not be the case for population estimates obtained by aggregating optimal estimates of individual performance.[11]

Item Mapping Procedures

Item mapping is a procedure by which a rating on a writing task (such as "Sufficient" or better) is associated with a certain point on the 0–300 writing scale. The item maps for writing are presented at the end of chapter 5. For example, the "Sufficient" rating for a given writing task will map onto the scale at 150 if students with an average scale score of at least 150 have a good chance of earning a rating of "Sufficient" or better. It is not clear how to define "a good chance" in terms of the probability, expressed as a percentage, that a given student will respond to an item at the score level designated. A response-probability convention has to be adopted that will divide those students who have a higher probability of success from those who have a lower probability. Which response-probability convention is adopted largely determines where ratings on writing tasks will map onto the writing scale. A lower-boundary convention maps the ratings on writing tasks to lower points on the scale, and a higher-boundary convention maps the same ratings on tasks to higher points on the scale. The underlying distribution of writing skills in the population does not change, but the choice of a response probability convention does have an impact on the proportion of the student population that is reported as "able to do" the tasks on the writing scale.

There is no obvious choice of a point along the probability scale that is clearly superior to any other point. On one hand, if the convention were set with a boundary at 50 percent, those above the boundary would be more likely to score at a particular rating (or higher) on the task than not, while those below the boundary would be more likely to receive a lower rating. Although this convention has some intuitive appeal, it was rejected on the grounds that having a 50:50 chance of getting a particular rating shows an insufficient degree of mastery. On the other hand, if the convention were set with a boundary at 80 percent, students above the criterion would have a high probability of receiving a given rating or higher. However, many students below this criterion may possess substantial writing ability that would be ignored by such a stringent criterion. In particular, those with a 50–80 percent probability of receiving a particular rating (or higher) would be more likely to receive that rating than not, yet would not be in the group described as "able to achieve" that level of performance on the task.

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[11] For theoretical and empirical justification of the procedures employed, see Mislevy, R. J. (1988). Randomization-Based Inferences About Latent Variables From Complex Samples. *Psychometrika, (56)*2, 177–196.

In a compromise between the 50 percent and the 80 percent conventions, NAEP has adopted a response probability convention of 65 percent for constructed-response questions such as writing tasks. This probability convention was established, in part, based on an intuitive judgment that it would provide the best picture of students' writing ability.

Some additional support for this convention was provided by Huynh.[12] He examined the IRT information provided by items, according to the IRT model used in scaling NAEP questions. Following Bock, Huynh decomposed the item information into that provided by a correct response [P(q) I(q)] and that provided by an incorrect response[(1– P(q)) I(q)].[13] Huynh showed that the item information provided by a correct response to a constructed-response item is maximized at the point along the writing scale at which the probability of a correct response is two-thirds. It should be noted, however, that maximizing the item information I(q), rather than the information provided by a correct response [P(q) I(q)], would imply an item mapping criterion closer to 50 percent.

Weighting and Variance Estimation

A complex sample design was used to select the students who were assessed. The properties of a sample selected through such a design could be very different from those of a simple random sample, in which every student in the target population has an equal chance of selection and in which the observations from different sampled students can be considered to be statistically independent of one another. Therefore, the properties of the sample for the data collection design were taken into account during the analysis of the assessment data.

One way that the properties of the sample design were addressed was by using sampling weights to account for the fact that the probabilities of selection were not identical for all students. All population and subpopulation characteristics based on the assessment data were estimated using sampling weights. These weights included adjustments for school and student nonresponse.

Not only must appropriate estimates of population characteristics be derived, but appropriate measures of the degree of uncertainty must be obtained for those statistics. Two components of uncertainty are accounted for in the variability of statistics based on student ability: (a) the uncertainty due to sampling only a relatively small number of students, and (b) the uncertainty due to sampling only a relatively small number of cognitive questions (in this case, writing tasks). The first component accounts for the variability associated with the estimated percentages of students who had certain background characteristics or who had a certain rating for their responses to a task.

Because NAEP uses complex sampling procedures, conventional formulas for estimating sampling variability that assume simple random sampling are inappropriate.

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[12] Huynh, H. (1998). On Score Locations of Binary and Partial Credit Items and Their Application to Item Mapping and Criterion-Referenced Interpretation. *Journal of Educational and Behavioral Statistics, 23*(1), 35–56.

[13] Bock, R. D. (1972). Estimating Item Parameters and Latent Ability When Responses are Scored in Two or More Latent Categories. *Psychometrika, 37*, 29–51.

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NAEP uses a jackknife replication procedure to estimate standard errors. The jackknife standard error provides a reasonable measure of uncertainty for any student information that can be observed without error. However, because each student typically responds to only two writing tasks, the scale score for any single student would be imprecise. In this case, NAEP's marginal estimation methodology can be used to describe the performance of groups and subgroups of students. The estimate of the variance of the students' posterior scale score distributions (which reflect the imprecision due to lack of measurement accuracy) is computed. This component of variability is then included in the standard errors of NAEP scale scores.[14]

Typically, when the standard error is based on a small number of students or when the group of students is enrolled in a small number of schools, the amount of uncertainty associated with the estimation of standard errors may be quite large. In such cases, the standard errors—and any confidence intervals or significance tests involving these standard errors—should be interpreted cautiously. Additional details concerning procedures for identifying such standard errors will be discussed in the technical documentation section of the NAEP web site at http://nces.ed.gov/nationsreportcard.

The reader is reminded that, as with findings from all surveys, NAEP results are subject to other kinds of error, including the effects of imperfect adjustment for student and school nonresponse and unknowable effects associated with the particular instrumentation and data collection methods. Nonsampling errors can be attributed to a number of sources—inability to obtain complete information about all selected schools in the sample (some students or schools refused to participate, or students participated but answered only certain questions); ambiguous definitions; differences in interpreting questions; inability or unwillingness to give correct background information; mistakes in recording, coding, or scoring data; and other errors in collecting, processing, sampling, and estimating missing data. The extent of nonsampling errors is difficult to estimate and, because of their nature, the impact of such errors cannot be reflected in the data-based estimates of uncertainty provided in NAEP reports.

Drawing Inferences from the Results

Because the percentages of students in these subpopulations and their average scale scores are based on samples rather than on the entire population of fourth-, eighth-, or twelfth-graders in the nation or a jurisdiction, the numbers reported are estimates. As such, they are subject to a measure of uncertainty, reflected in the standard error of the estimate. When the estimated percentages or average scale scores of certain groups are compared, the standard error should be taken into account, and observed similarities or differences should not be relied on solely. Therefore, the comparisons discussed in this report are based on statistical tests that consider the estimated standard errors of those statistics and the magnitude of the difference among the averages or percentages.

[14] For further details, see Johnson, E. G., and Rust, K. F. (1992). Population Inferences and Variance Estimation for NAEP Data. *Journal of Educational Statistics, (17)*2, 175–190.

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For the data presented in this report, all the estimates have corresponding estimated standard errors. For example, table A.8 shows the average scale score for the NAEP 1998 and 2002 national writing assessments, and table A.9 shows the percentage of students within each achievement level range and at or above achievement levels. In both tables, estimated standard errors appear in parentheses next to each estimated scale score or percentage. Additional examples of estimated standard errors corresponding with results included in this report are presented in tables A.10, A.11, and A.12. For the estimated standard errors corresponding to other data in this report, the reader can go to the data tool on the NCES web site at http://nces.ed.gov/nationsreportcard/naepdata/.

Using confidence intervals based on the standard errors provides a way to take into account the uncertainty associated with sample estimates and to make inferences about the population averages and percentages in a manner that reflects that uncertainty. An estimated sample average scale score plus or minus 1.96 standard errors approximates a 95 percent confidence interval for the corresponding population quantity. This statement means that one can conclude with an approximately 95 percent level of confidence that the average performance of the entire population of interest (e.g., all fourth-grade students in public and nonpublic schools) is within plus or minus 1.96 standard errors of the sample average.

For example, suppose that the average writing scale score of the students in a particular group was 162 with an estimated standard error of 1.2. An approximately 95 percent confidence interval for the population quantity would be as follows:

$$\text{Average} \pm 1.96 \text{ standard errors}$$

$$162 \pm 1.96 \times 1.2$$

$$162 \pm 2.4$$

$$(159.6, 164.4)$$

Thus, one can conclude with a 95 percent level of confidence that the average scale score for the entire population of students in that group is between 159.6 and 164.4. It should be noted that this example and the examples in the following sections are illustrative. More precise estimates carried out to one or more decimal places are used in the actual analyses.

Similar confidence intervals can be constructed for percentages, if the percentages are not extremely large or extremely small. Extreme percentages should be interpreted with caution. Adding or subtracting the standard errors associated with extreme percentages could cause the confidence interval to exceed 100 percent or fall below 0 percent, resulting in numbers that are not meaningful. A more complete discussion of extreme percentages will appear in the technical documentation section of the NAEP web site at http://nces.ed.gov/nationsreportcard.

Table A.8 Average writing scale scores and standard errors, grades 4, 8, and 12: 1998 and 2002

	1998	2002
Grade 4	150 (0.7) *	154 (0.4)
Grade 8	150 (0.6) *	153 (0.5)
Grade 12	150 (0.7)	148 (0.8)

* Significantly different from 2002.
NOTE: Standard errors of the estimated scale scores appear in parentheses.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

Table A.9 Percentage of students and standard errors by writing achievement level, grades 4, 8, and 12: 1998 and 2002

		Below *Basic*	At *Basic*	At *Proficient*	At *Advanced*	At or above *Basic*	At or above *Proficient*
Grade 4							
	1998	16 (0.4) *	61 (0.6) *	22 (0.7) *	1 (0.2) *	84 (0.4) *	23 (0.8) *
	2002	14 (0.4)	58 (0.4)	26 (0.4)	2 (0.1)	86 (0.4)	28 (0.4)
Grade 8							
	1998	16 (0.5)	58 (0.5) *	25 (0.7) *	1 (0.1) *	84 (0.5)	27 (0.7) *
	2002	15 (0.4)	54 (0.5)	29 (0.5)	2 (0.1)	85 (0.4)	31 (0.6)
Grade 12							
	1998	22 (0.7) *	57 (0.7) *	21 (0.7)	1 (0.1) *	78 (0.7) *	22 (0.7)
	2002	26 (0.7)	51 (0.7)	22 (0.7)	2 (0.2)	74 (0.7)	24 (0.8)

* Significantly different from 2002.
NOTE: Standard errors of the estimated percentages appear in parentheses.
Percentages within each writing achievement-level range may not add to 100, or to the exact percentages at or above achievement levels, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table A.10 Average writing scale scores and standard errors, by student eligibility for free/reduced-price school lunch and race/ethnicity , grades 4, 8, and 12: 2002

	Eligible	Not eligible	Information not available
Grade 4			
Total	141 (0.8)	163 (0.5)	161 (1.5)
White	147 (0.5)	165 (0.5)	166 (1.2)
Black	136 (0.8)	150 (1.2)	145 (2.0)
Hispanic	137 (2.2)	155 (1.4)	147 (3.4)
Asian/Pacific Islander	155 (2.7)	173 (1.9)	172 (3.7)
American Indian/Alaska Native	132 (2.2)	151 (3.0)	143 (4.7)
Grade 8			
Total	136 (0.5)	162 (0.7)	161 (1.5)
White	144 (0.7)	164 (0.7)	168 (1.6)
Black	129 (0.7)	145 (1.1)	142 (2.1)
Hispanic	131 (1.1)	149 (1.5)	143 (2.0)
Asian/Pacific Islander	144 (2.6)	170 (2.9)	166 (5.5)
American Indian/Alaska Native	127 (3.8)	151 (3.5)	135 (5.0) !
Grade 12			
Total	132 (1.4)	152 (1.0)	156 (1.5)
White	139 (1.9)	154 (1.0)	159 (1.5)
Black	123 (1.5)	134 (2.0)	137 (3.1)
Hispanic	130 (1.6)	139 (2.2)	144 (4.1)
Asian/Pacific Islander	134 (3.1)	155 (3.3)	161 (5.6) !
American Indian/Alaska Native	*** (***)	*** (***)	*** (***)

! The nature of the sample does not allow accurate determination of the variability of the statistic.
***(***) Quality control activities and special analysis raised concerns about the accuracy and precision of grade 12 American Indian data. As a result, they are omitted from this report.
NOTE: Standard errors of the estimated scale scores appear in parentheses.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table A.11 Average writing scale scores and standard errors, grade 8 public schools: By state, 1998 and 2002

Grade 8	1998	2002
Nation (Public) [1]	148 (0.6) *	152 (0.6)
Alabama	144 (1.4)	142 (1.5)
Arizona	143 (1.5)	141 (1.6)
Arkansas	137 (1.2) *,**	142 (1.3)
California †	141 (1.8)	144 (1.8)
Colorado	151 (1.3)	—
Connecticut	165 (1.4)	164 (1.5)
Delaware	144 (1.4) *,**	159 (0.6)
Florida	142 (1.2) *,**	154 (1.6)
Georgia	146 (1.3)	147 (1.4)
Hawaii	135 (1.0)	138 (0.8)
Idaho	—	151 (1.3)
Indiana	—	150 (1.5)
Kansas †	—	155 (1.5)
Kentucky	146 (1.5)	149 (1.1)
Louisiana	136 (1.4) *,**	142 (1.6)
Maine	155 (1.5)	157 (1.2)
Maryland	147 (1.5) *,**	157 (1.5)
Massachusetts	155 (1.7) *,**	163 (1.5)
Michigan	—	147 (1.6)
Minnesota †	148 (1.9)	—
Mississippi	134 (1.3) *,**	141 (1.1)
Missouri	142 (1.4) *,**	151 (1.2)
Montana †	150 (1.5)	152 (1.3)
Nebraska	—	156 (1.3)
Nevada	140 (0.9)	137 (0.9)
New Mexico	141 (0.8)	140 (1.1)
New York †	146 (1.5) *,**	151 (1.6)
North Carolina	150 (1.5) *,**	157 (1.3)
North Dakota †	—	147 (1.2)
Ohio	—	160 (2.1)
Oklahoma	152 (1.3)	150 (1.2)
Oregon †	149 (1.5) *	155 (2.1)
Pennsylvania	—	154 (1.4)
Rhode Island	148 (0.7) *,**	151 (0.8)
South Carolina	140 (1.1) *,**	146 (1.1)
Tennessee †	148 (1.8)	148 (1.5)
Texas	154 (1.5)	152 (1.6)
Utah	143 (1.2)	143 (1.0)
Vermont	—	163 (1.2)
Virginia	153 (1.2)	157 (1.3)
Washington †	148 (1.5) *,**	155 (1.8)
West Virginia	144 (1.6)	144 (1.4)
Wisconsin †	153 (1.3)	—
Wyoming	146 (1.4) *,**	151 (0.9)
Other Jurisdictions		
American Samoa	—	95 (2.3)
District of Columbia	126 (1.2)	128 (0.8)
DDESS [2]	160 (2.6)	164 (1.5)
DoDDS [3]	156 (1.2) *,**	161 (0.8)
Guam	—	130 (1.4)
Virgin Islands	124 (3.8)	128 (1.2)

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
† Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdiction or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
[1] National results that are presented for assessments prior to 2002 are based on the national sample, not an aggregated state assessment samples.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools. [3] Department of Defense Dependents Schools (Overseas).
NOTE: Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table A.12 Percentage of students at or above proficient in writing and standard errors, by race/ethnicity, grade 8 public schools: By state, 1998 and 2002

Grade 8	White		Black		Hispanic	
	1998	2002	1998	2002	1998	2002
Nation (Public) [1]	31 (1.0) *	37 (0.7)	7 (0.7) *	13 (0.6)	9 (1.2) *	15 (1.2)
Alabama	22 (1.4)	26 (2.0)	6 (1.5)	9 (1.5)	***(***)	***(***)
Arizona	28 (2.1)	27 (2.2)	6 (3.7)	13 (4.4)	7 (1.4)	9 (1.4)
Arkansas	16 (1.4) *	22 (1.8)	4 (1.1)	8 (2.2)	***(***)	12 (3.6)
California [1]	30 (2.5)	34 (2.8)	11 (3.3)	10 (3.1)	7 (1.3)	13 (2.6)
Colorado	32 (1.8)	—	10 (4.9)	—	9 (1.6)	—
Connecticut	52 (1.6)	55 (1.8)	14 (2.9)	15 (2.7)	13 (4.6)	17 (4.1)
Delaware	28 (2.2) *,**	43 (1.1)	9 (2.0) *,**	18 (1.3)	12 (4.5)	20 (4.2)
Florida	26 (2.3) *,**	41 (1.9)	7 (1.6) *,**	17 (2.4)	15 (3.2) *	26 (2.9)
Georgia	31 (2.3)	33 (2.0)	9 (1.3)	14 (2.1)	***(***)	7 (2.5)
Hawaii	20 (3.3)	21 (2.6)	***(***)	17 (6.2)	***(***)	***(***)
Idaho	—	30 (1.7)	—	***(***)	—	11 (2.8)
Indiana	—	29 (2.4)	—	7 (2.9)	—	***(***)
Kansas [1]	—	36 (1.8)	—	13 (4.5)	—	13 (4.5)
Kentucky	22 (1.8)	26 (1.6)	8 (2.9)	12 (2.6)	***(***)	***(***)
Louisiana	17 (1.3) *,**	26 (1.9)	4 (0.9) *,**	8 (1.1)	***(***)	***(***)
Maine	32 (1.7)	36 (1.5)	***(***)	***(***)	***(***)	***(***)
Maryland	31 (2.0) *,**	45 (2.2)	7 (2.0) *,**	17 (2.0)	12 (4.4)	24 (4.8)
Massachusetts	36 (2.1) *,**	49 (1.5)	9 (3.4)	18 (3.4)	6 (2.2)	10 (2.8)
Michigan	—	29 (1.8)	—	9 (2.5)	—	***(***)
Minnesota [1]	27 (2.2)	—	8 (3.5)	—	***(***)	—
Mississippi	17 (1.4)	20 (2.0)	4 (1.0)	6 (1.1)	***(***)	***(***)
Missouri	20 (1.6) *,**	29 (1.6)	4 (1.8) *	13 (3.5)	***(***)	***(***)
Montana [1]	26 (1.9)	32 (1.6)	***(***)	***(***)	***(***)	***(***)
Nebraska	—	35 (2.2)	—	10 (4.4)	—	11 (3.2)
Nevada	21 (1.2)	19 (1.2)	10 (3.8)	8 (2.2)	7 (1.8)	7 (1.4)
New Mexico	27 (2.1)	29 (2.0)	29 (8.6)	***(***)	11 (1.5)	13 (1.2)
New York [1]	29 (2.2) *,**	41 (2.5)	7 (2.4)	12 (2.4)	5 (1.8)	12 (2.8)
North Carolina	35 (2.2) *	43 (2.2)	11 (1.5) *,**	18 (1.9)	***(***)	16 (4.3)
North Dakota [1]	—	25 (1.6)	—	***(***)	—	***(***)
Ohio	—	42 (2.5)	—	14 (3.7)	—	***(***)
Oklahoma	29 (1.6)	31 (1.8)	7 (3.6)	13 (2.7)	13 (4.6)	13 (5.1)
Oregon [1]	28 (1.7) *	35 (2.4)	***(***)	***(***)	13 (4.5)	17 (3.9)
Pennsylvania	—	37 (1.8)	—	7 (1.5)	—	9 (2.6) !
Rhode Island	29 (1.5) *,**	35 (1.3)	10 (2.9)	10 (2.2)	5 (2.0)	9 (1.9)
South Carolina	22 (1.5) *,**	28 (1.9)	5 (1.3) *	9 (1.2)	***(***)	***(***)
Tennessee [1]	28 (2.1)	27 (2.0)	9 (2.2)	12 (2.8)	***(***)	***(***)
Texas	40 (2.1)	47 (2.7)	20 (3.9)	20 (3.1)	20 (2.3)	17 (2.0)
Utah	23 (1.2)	25 (1.1)	***(***)	***(***)	5 (2.6)	10 (2.5)
Vermont	—	42 (1.6)	—	***(***)	—	***(***)
Virginia	33 (1.7)	39 (2.2)	12 (1.7)	14 (1.7)	21 (6.0)	20 (6.0)
Washington [1]	27 (2.0) *,**	37 (2.4)	11 (4.7)	19 (5.2)	7 (2.6)	16 (3.0)
West Virginia	18 (1.7)	21 (1.4)	16 (5.9)	13 (5.3)	***(***)	***(***)
Wisconsin [1]	30 (1.8)	—	16 (3.8)	—	13 (5.4) !	—
Wyoming	24 (1.9)	30 (1.3)	***(***)	***(***)	14 (5.7)	12 (3.3)
Other Jurisdictions						
American Samoa	—	***(***)	—	***(***)	—	***(***)
District of Columbia	53 (10.3)	***(***)	9 (1.3)	8 (0.9)	10 (5.1)	11 (3.1)
DDESS [2]	47 (3.8)	51 (2.8)	27 (5.1)	27 (4.5)	32 (6.6)	38 (5.2)
DoDDS [3]	37 (2.7)	43 (1.8)	22 (4.0)	25 (2.8)	28 (5.2)	28 (4.3)
Guam	—	***(***)	—	***(***)	—	***(***)
Virgin Islands	***(***)	***(***)	8 (2.3)	4 (0.9)	7 (4.0)	2 (1.9)

See footnotes at end of table. ▶

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Table A.12 Percentage of students at or above proficient in writing and standard errors, by race/ethnicity, grade 8 public schools: By state, 1998 and 2002—Continued

Grade 8	Asian/Pacific Islander		American Indian/Alaska Native		Other	
	1998	2002	1998	2002	1998	2002
Nation (Public) [1]	30 (5.8)	39 (2.8)	11 (4.6) !	17 (2.6)	20 (6.3) !	28 (5.0)
Alabama	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Arizona	***(***)	***(***)	12 (5.9)	8 (2.2) !	***(***)	***(***)
Arkansas	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
California [1]	35 (5.9)	36 (4.8)	***(***)	***(***)	***(***)	***(***)
Colorado	34 (8.9)	—	***(***)	—	***(***)	—
Connecticut	***(***)	55 (6.3)	***(***)	***(***)	***(***)	***(***)
Delaware	***(***)	63 (7.1)	***(***)	***(***)	***(***)	***(***)
Florida	***(***)	47 (8.1)	***(***)	***(***)	***(***)	***(***)
Georgia	***(***)	27 (6.2)	***(***)	***(***)	***(***)	***(***)
Hawaii	15 (1.2)	18 (1.0)	***(***)	***(***)	11 (2.7)	18 (2.7)
Idaho	—	***(***)	—	***(***)	—	***(***)
Indiana	—	***(***)	—	***(***)	—	***(***)
Kansas [1]	—	***(***)	—	***(***)	—	***(***)
Kentucky	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Louisiana	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Maine	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Maryland	40 (8.7)	55 (7.2)	***(***)	***(***)	***(***)	***(***)
Massachusetts	36 (8.1)	45 (6.2)	***(***)	***(***)	***(***)	***(***)
Michigan	—	***(***)	—	***(***)	—	***(***)
Minnesota [1]	11 (4.8)	—	***(***)	—	***(***)	—
Mississippi	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Missouri	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Montana [1]	***(***)	***(***)	14 (4.5) !	10 (1.6) !	***(***)	***(***)
Nebraska	—	***(***)	—	***(***)	—	***(***)
Nevada	18 (6.0)	28 (4.8)	***(***)	***(***)	***(***)	***(***)
New Mexico	***(***)	***(***)	12 (2.2)	9 (2.4)	***(***)	***(***)
New York [1]	27 (7.8) !	34 (7.5)	***(***)	***(***)	***(***)	***(***)
North Carolina	***(***)	***(***)	18 (6.4)	***(***)	***(***)	***(***)
North Dakota [1]	—	***(***)	—	7 (3.5) !	—	***(***)
Ohio	—	***(***)	—	***(***)	—	***(***)
Oklahoma	***(***)	***(***)	16 (4.0)	22 (2.6)	***(***)	***(***)
Oregon [1]	35 (6.2)	41 (7.5)	***(***)	***(***)	***(***)	***(***)
Pennsylvania	—	31 (10.4) !	—	***(***)	—	***(***)
Rhode Island	19 (6.2)	***(***)	***(***)	***(***)	***(***)	***(***)
South Carolina	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Tennessee [1]	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Texas	35 (7.0)	30 (9.2) !	***(***)	***(***)	***(***)	***(***)
Utah	16 (5.6)	17 (5.8)	***(***)	***(***)	***(***)	***(***)
Vermont	—	***(***)	—	***(***)	—	***(***)
Virginia	40 (7.7)	46 (7.2)	***(***)	***(***)	***(***)	***(***)
Washington [1]	27 (5.9)	35 (4.6)	***(***)	***(***)	***(***)	***(***)
West Virginia	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
Wisconsin [1]	***(***)	—	***(***)	—	***(***)	—
Wyoming	***(***)	***(***)	8 (5.2) !	13 (4.9)	***(***)	***(***)
Other Jurisdictions						
American Samoa	—	3 (1.3)	—	***(***)	—	***(***)
District of Columbia	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)
DDESS [2]	***(***)	***(***)	***(***)	***(***)	***(***)	45 (8.4)
DoDDS [3]	30 (7.1)	35 (6.3)	***(***)	***(***)	29 (3.0)	38 (3.0)
Guam	—	13 (1.4)	—	***(***)	—	***(***)
Virgin Islands	***(***)	***(***)	***(***)	***(***)	***(***)	***(***)

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
! The nature of the sample does not allow accurate determination of the variability of the statistic.
[1] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
* Significantly different from 2002 when only one jurisdiction or the nation is being examined.
** Significantly different from 2002 when using a multiple-comparison procedure based on all jurisdictions that participated both years.
***(***) Sample size is insufficient to permit a reliable estimate.
[2] Department of Defense Domestic Dependent Elementary and Secondary Schools. [3] Department of Defense Dependents Schools (Overseas).
Comparative performance results may be affected by changes in exclusion rates for students with disabilities and limited English proficient students in the NAEP samples.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Analyzing Group Differences in Averages and Percentages

Statistical tests determine whether the evidence, based on the data from the groups in the sample, is strong enough to conclude that the averages or percentages are actually different for those groups in the population. If the evidence is strong (i.e., the difference is statistically significant), the report describes the group averages or percentages as being different (e.g., one group performed higher or lower than another group), regardless of whether the sample averages or percentages appear to be approximately the same. The reader is cautioned to rely on the results of the statistical tests rather than on the apparent magnitude of the difference between sample averages or percentages when determining whether the sample differences are likely to represent actual differences among the groups in the population.

To determine whether a real difference exists between the average scale scores (or percentages of a certain attribute) for two groups in the population, one needs to obtain an estimate of the degree of uncertainty associated with the difference between the averages (or percentages) of these groups for the sample. This estimate of the degree of uncertainty, called the "standard error of the difference" between the groups, is obtained by taking the square of each group's standard error, summing the squared standard errors, and taking the square root of that sum.

Standard Error of the Difference =

$$SE_{A-B} = \sqrt{(SE_A^2 + SE_B^2)}$$

The standard error of the difference can be used, just like the standard error for an individual group average or percentage, to help determine whether differences among groups in the population are real. The difference between the averages or percentages of the two groups plus or minus 1.96 standard errors of the difference represents an approximately 95 percent confidence interval. If the resulting interval includes zero, there is insufficient evidence to claim a real difference between the groups in the population. If the interval does not contain zero, the difference between the groups is statistically significant at the 0.05 level.

The following example of comparing groups, addresses the problem of determining whether the average writing scale score of group A is higher than that of group B. The sample estimates of the average scale scores and estimated standard errors are as follows:

Group	Average Scale Score	Standard Error
A	137	0.9
B	135	1.1

The difference between the estimates of the average scale scores of groups A and B is two points (137−135). The estimated standard error of this difference is

$$\sqrt{(0.9^2 + 1.1^2)} = 1.4$$

Thus, an approximately 95 percent confidence interval for this difference is plus or minus 1.96 standard errors of the difference.

$$2 \pm 1.96 \times 1.4$$

$$2 \pm 2.7$$

$$(-0.7, 4.7)$$

The value zero is within the confidence interval; therefore, there is insufficient evidence to claim that group A outperformed group B.

The procedure above is appropriate to use when it is reasonable to assume that the groups being compared have been independently sampled for the assessment. Such an assumption is clearly warranted when comparing results across assessment years (e.g., comparing the 1998 and 2002 results for a particular state or subgroup) or when comparing state results with each other. This is the approach used for NAEP reports when comparisons involving independent groups are made. The assumption of independence is violated to some degree when comparing group results for the nation or a particular state (e.g., comparing national 2002 results for males and females), since these samples of students have been drawn from the same schools. When the groups being compared do not share students (as is the case, for example, comparing males and females) the impact of this violation of the independence assumption on the outcome of the statistical tests is assumed to be small, and NAEP, by convention, has, for computational convenience, routinely applied the procedures described above to those cases as well.

When making comparisons of results for groups that share a considerable proportion of students in common, it is not appropriate to ignore such dependencies. In such cases, NAEP has used procedures appropriate to comparing dependent groups. When the dependence in group results is due to the overlap in samples (e.g., when a subgroup is being compared to a total group), a simple modification of the usual standard error of the difference formula can be used. The formula for such cases is:[15]

$$SE_{Total-Subgroup} = \sqrt{(SE^2_{Total} + SE^2_{Subgroup} - 2pSE^2_{Subgroup})}$$

where p is the proportion of the total group contained in the subgroup. This formula was used for this report when a state was compared to the aggregate nation or a school district was compared to the entire state it belongs to.

[15] This is a special form of the common formula for standard error of dependent samples. The standard formula can be found, for example, in Kish, L. (1995). *Survey Sampling*. New York: John Wiley and Sons, Inc.

Conducting Multiple Tests

The procedures in the previous section and the certainty ascribed to intervals (e.g., a 95 percent confidence interval) are based on statistical theory that assumes that only one confidence interval or test of statistical significance is being performed. However, there are times when many different groups are being compared (i.e., multiple sets of confidence intervals are being analyzed). In sets of confidence intervals, statistical theory indicates that the certainty associated with the entire set of intervals is less than that attributable to each individual comparison from the set. To hold the significance level for the set of comparisons at a particular level (e.g., 0.05), adjustments (called "multiple comparison procedures")[16] must be made to the methods described in the previous section. One such procedure, the Benjamini-Hochberg False Discovery Rate (FDR) procedure was used to control the certainty level.[17]

Unlike the other multiple comparison procedures that control the familywise error rate (i.e., the probability of making even one false rejection in the set of comparisons), the FDR procedure controls the expected proportion of falsely rejected hypotheses. Furthermore, the FDR procedure used in NAEP is considered appropriately less conservative than familywise procedures for large families of comparisons.[18] Therefore, the FDR procedure is more suitable for multiple comparisons in NAEP than other procedures. A detailed description of the FDR procedure will appear in the technical documentation section of the NAEP web site at http://nces.ed.gov/nationsreportcard.

To illustrate how the FDR procedure is used, consider the comparisons of current and previous years' average writing scale scores for the five groups presented in table A.13. Note that the difference in average scale scores and the estimated standard error of the difference are calculated in a way comparable to that of the example in the previous section. The test statistic shown is the difference in average scale scores divided by the estimated standard error of the difference. (Rounding of the data occurs after the test is done.)

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16 Miller, R. G. (1981). *Simultaneous Statistical Inference.* (2nd ed). New York: Springer-Verlag.

17 Benjamini, Y., and Hochberg, Y. (1995). Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing. *Journal of the Royal Statistical Society,* Series B, no. 1, 289–300.

18 Williams, V. S. L., Jones, L. V., and Tukey, J. W. (1999). Controlling Error in Multiple Comparisons with Examples From State-to-State Differences in Educational Achievement. *Journal of Educational and Behavioral Statistics, 24*(1), 42–69.

Table A.13 Example of FDR comparisons of average scale scores for different groups of students

	Previous year		Current year		Previous year and current year			
	Average scale score	Standard error	Average scale score	Standard error	Difference in averages	Standard error of difference	Test statistic	Percent confidence[1]
Group 1	224	1.3	226	1.0	2.08	1.62	1.29	20
Group 2	187	1.7	193	1.7	6.31	2.36	2.68	1
Group 3	191	2.6	197	1.7	6.63	3.08	2.15	4
Group 4	229	4.4	232	4.6	3.24	6.35	0.51	62
Group 5	201	3.4	196	4.7	-5.51	5.81	0.95	35

[1] The percent confidence is 2(1-F(x)) where F(x) is the cumulative distribution of the t distribution with the degrees of freedom adjusted to reflect the complexities of the sample design.
FDR: False Discovery Rate.

The difference in average scale scores and its estimated standard error can be used to find an approximately 95 percent confidence interval as in the example in the previous section or they can be used to identify a confidence percentage. In the example in the previous section, because an approximately 95 percent confidence interval was desired, the number 1.96 was used to multiply the estimated standard error of the difference to create the approximate confidence interval. In the current example, the confidence interval for the test statistics is identified from statistical tables. Instead of checking to see if zero is within the 95 percent confidence interval about the mean, the significance level from the statistical tables can be directly compared to 100 − 95 = 5 percent.

If the comparison of average scale scores across two years was made for only one of the five groups, there would be a significant difference between the average scale scores for the two years if the significance level were less than 5 percent. However, because we are interested in the difference in average scale scores across the two years for all five of the groups, comparing each of the significance levels to 5 percent is not adequate. Groups of students defined by shared characteristics, such as racial/ethnic groups, are treated as sets or families when making comparisons. However, comparisons of average scale scores for each pair of years were treated separately, so the steps described in this example would be replicated for the comparison of other current and previous year average scale scores.

Using the FDR procedure to take into account that all comparisons are of interest to us, the percents of confidence in the example are ordered from largest to smallest: 62, 35, 20, 4, and 1. In the FDR procedure, 62 percent confidence for the group 4 comparison would be compared to 5 percent, 35 percent for the group 5 comparison would be compared to $0.05 \times (5-1)/5 = 0.04 = 4$ percent,[19] 20 percent for the group 1 comparison would be compared to $0.05 \times (5-2)/5 = 0.03 = 3$ percent, 4 percent for the group 3 comparison would be compared to $0.05 \times (5-3)/5 = 0.02 = 2$ percent, and 1 percent for the group 2 comparison (actually slightly smaller than 1 prior to rounding) would be compared to 0.05 ×

[19] The level of confidence times the number of comparisons minus one divided by the number of comparisons is $0.05 \times (5-1)/5 = 0.04 = 4$ percent.

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$(5-4)/5 = 0.01 = 1$ percent. The procedure stops with the first contrast found to be significant. The last of these comparisons is the only one for which the percent confidence is smaller than the FDR procedure value. The difference in the current year and previous years' average scale scores for the group 2 students is significant; for all of the other groups, average scale scores for current and previous year are not significantly different from one another. In practice, a very small number of counterintuitive results occur when the FDR procedures are used to examine between-year differences in subgroup results by jurisdiction. In those cases, results were not included in this report.

NAEP Reporting Groups

Results are provided for groups of students defined by shared characteristics—gender, race or ethnicity, school's type of location, Title I participation, eligibility for free/reduced-price school lunch, and type of school. Based on participation rate criteria, results are reported for subpopulations only when sufficient numbers of students and adequate school representation are present. The minimum requirement is at least 62 students in a particular subgroup from at least five primary sampling units (PSUs).[20] However, the data for all students, regardless of whether their subgroup was reported separately, were included in computing overall results. Definitions of the subpopulations are presented below.

Gender

Results are reported separately for males and females.

Race/Ethnicity

In all NAEP assessments, data about student race/ethnicity is collected from two sources: school records and student self-reports. Previously, NAEP has used student self-reported race as the primary race/ethnicity reporting variable. In 2002, it was decided to change the student race/ethnicity variable highlighted in NAEP reports. Starting in 2002, school-recorded race will become the race/ethnicity variable presented in NAEP reports. Information based on student self-reported race/ethnicity will continue to be available on the NAEP Data Tool (http://nces.ed.gov/nationsreportcard/naepdata/).

In order to allow comparisons across years, both the 1998 and 2002 writing assessment results presented in this report are based on school-reported information for six mutually exclusive racial/ethnic categories: White, Black, Hispanic, Asian/Pacific Islander, American Indian (including Alaska Native), and Other. Students who were identified with more than one of the first five categories or had a background other than the ones listed were categorized as Other. Information about the percentage of students identified as Other is presented in tables B.12 and B.13 in appendix B.

Type of Location

Results from the 2002 assessment are reported for students attending schools in three mutually exclusive location types:

Central city: This category includes central cities of all Consolidated Metropolitan Statistical Area (CMSA) or Metropolitan Statistical Area (MSA) as defined by the

[20] For the NAEP national assessments prior to 2002, a PSU is a selected geographic region (a county, group of counties, or metropolitan statistical area). In 2002, the first-stage sampling units are schools (public and nonpublic) in the selection of the combined sample. Further details about the procedure for determining minimum sample size will appear in the technical documentation section of the NAEP web site at http://nces.ed.gov/nationsreportcard.

220 BEST COPY AVAILABLE

Office of Management and Budget. Central city is a geographical term and is not synonymous with "inner city."

Urban fringe/large town: The urban fringe category includes any incorporated place, census designated place, or non-place territory within a CMSA or MSA of a large or mid-sized city and defined as urban by the U.S. Census Bureau, but which do not qualify as central city. A large town is defined as a place outside a CMSA or MSA with a population greater than or equal to 25,000.

Rural/small town: Rural includes all places and areas with populations of less than 2,500 that are classified as rural by the U.S. Census Bureau. A small town is defined as a place outside a CMSA or MSA with a population of less than 25,000, but greater than or equal to 2,500.

Results for each type of location are not compared across years. This is due to new methods used by NCES to identify the type of location assigned to each school in the Common Core of Data (CCD). The new methods were put into place by NCES in order to improve the quality of the assignments, and they take into account more information about the exact physical location of the school. The variable was revised in NAEP beginning with the 2000 assessments.

Title I Participation

Based on available school records, students were classified either as currently participating in a Title I program, receiving Title I services, or as not receiving such services. The classification applies only to the school year when the assessment was administered (i.e., the 2001–02 school year) and is not based on participation in previous years. If the school does not offer any Title I programs or services, all students in that school would be classified as not participating.

Eligibility for Free/Reduced-Price School Lunch

As part of the Department of Agriculture's National School Lunch Program, schools can receive cash subsidies and donated commodities in turn for offering free or reduced-price lunches to eligible children. Based on available school records, students were classified as either currently eligible for the free/reduced-price school lunch or not eligible. Eligibility for free and reduced-price lunches is determined by students' family income in relation to the federally established poverty level. Free lunch qualification is set at 130 percent of the poverty level, and reduced-price lunch qualification is set at 170 percent of the poverty level. The classification applies only to the school year when the assessment was administered (i.e., the 2001–02 school year) and is not based on eligibility in previous years. If school records were not available, the student was classified as "Information not available." If the school did not participate in the program, all students in that school were classified as "Information not available."

Type of School

Results are reported by the type of school that the student attends—public or nonpublic. Nonpublic schools include Catholic and other private schools. Because they are funded by federal authorities, not state/local governments, Bureau of Indian Affairs (BIA) schools and Department of Defense Domestic Dependent Elementary and Secondary Schools (DDESS) are not included in either the public or nonpublic categories; they are included in the overall national results.

Grade 12 Participation Rates

NAEP has been described as a "low-stakes" assessment. That is, students receive no individual scores, and their NAEP performance has no affect on their grades, promotions, or graduation. There has been continued concern that this lack of consequences affects participation rates of students and schools, as well as the motivation of students to perform well on NAEP. Of particular concern has been the performance of twelfth-graders, who typically have lower student participation rates than fourth- and eighth-graders and who are more likely to omit responses compared to their younger cohorts.

In NAEP, there has been a consistent pattern of lower participation rates for older students. In the 2002 NAEP assessments, for example, the student participation rates were 94 percent and 92 percent at grades 4 and 8, respectively. At grade 12, however, the participation rate was 74 percent. School participation rates (the percentage of sampled schools that participated in the assessment) have also typically decreased with grade level. In the 2002 assessments, the school participation rate was 85 percent for the fourth grade, 83 percent for the eighth grade, and 75 percent for the twelfth grade.

The effect of participation rates on student performance, however, is unclear. Students may choose not to participate in NAEP for many reasons such as desire to attend regular classes and not miss important instruction or conflict with other school-based activities. Similarly, there are a variety of reasons for which various schools do not participate. The sampling weights and nonresponse adjustments, described earlier in this document, provide an approximate statistical adjustment for nonparticipation. However, the effect of some school and student nonparticipation may have some undetermined effect on results.

More research is needed to delineate the factors that contribute to nonparticipation and lack of motivation. To that end, NCES is currently investigating how various types of incentives can be effectively used to increase participation in NAEP.

Cautions in Interpretations

As described earlier, the NAEP writing scale makes it possible to examine relationships between students' performance and various background factors measured by NAEP. However, a relationship that exists between achievement and another variable does not reveal its underlying cause, which may be influenced by a number of other variables. Similarly, the assessments do not reflect the influence of unmeasured variables. The results are most useful when they are considered in combination with other knowledge about the student population and the educational system, such as trends in instruction, changes in the school-age population, and societal demands and expectations.

A caution is also warranted for some small population group estimates. At times in this report, smaller population groups show very large increases or decreases across years in average scores. However, it is often necessary to interpret such score gains with extreme caution. For one thing, the effects of exclusion-rate changes for small subgroups may be more marked for small groups than they are for the whole population. Also, the standard errors are often quite large around the score estimates for small groups, which in turn means the standard error around the gain is also large.

B Appendix B
Subgroup Percentages

Table B.1 Weighted percentage of students, by gender, grades 4, 8, and 12: 1998 and 2002

		1998	2002
Grade 4			
	Male	51	51
	Female	49	49
Grade 8			
	Male	51	50
	Female	49	50
Grade 12			
	Male	48	49
	Female	52	51

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table B.2 Weighted percentage of students, by race/ethnicity, grades 4, 8, and 12: 1998 and 2002

	1998	2002
Grade 4		
White	71	61
Black	16	17
Hispanic	9	16
Asian/Pacific Islander	3	4
American Indian/Alaska Native	1	1
Other	1	1
Grade 8		
White	70	65
Black	15	15
Hispanic	11	14
Asian/Pacific Islander	3	4
American Indian/Alaska Native	1	1
Other	#	1
Grade 12		
White	72	70
Black	14	13
Hispanic	10	10
Asian/Pacific Islander	4	5
American Indian/Alaska Native	#	#
Other	#	1

Percentage rounds to zero.
NOTE: Percentages may not add to 100, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table B.3 Weighted percentage of students, by eligibility for free/reduced-price school lunch, grades 4, 8, and 12: 1998 and 2002

	1998	2002
Grade 4		
Eligible	34	40
Not eligible	54	47
Information not available	13	13
Grade 8		
Eligible	27	31
Not eligible	55	53
Information not available	17	15
Grade 12		
Eligible	14	19
Not eligible	66	64
Information not available	20	17

NOTE: Percentages may not add to 100, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table B.4 Weighted percentage of students, by eligibility for free/reduced-price school lunch and race/ethnicity, grades 4, 8, and 12: 2002

	Eligible	Not eligible	Information not available
Grade 4			
White	24	62	14
Black	69	23	8
Hispanic	68	19	13
Asian/Pacific Islander	33	47	20
American Indian/Alaska Native	60	31	9
Grade 8			
White	20	65	16
Black	58	30	12
Hispanic	58	28	14
Asian/Pacific Islander	31	45	24
American Indian/Alaska Native	51	37	12
Grade 12			
White	11	71	18
Black	44	44	12
Hispanic	43	41	17
Asian/Pacific Islander	24	59	16
American Indian/Alaska Native	***	***	***

*** Quality control activities and special analysis raised concerns about the accuracy and precision of grade 12 American Indian data in 2002. As a result, they are omitted from this report.
NOTE: Percentages may not add to 100, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table B.5 Weighted percentage of students, by school participation in Title I, grades 4, 8, and 12: 2002

	2002
Grade 4	
Participated	33
Did not participate	67
Grade 8	
Participated	19
Did not participate	81
Grade 12	
Participated	10
Did not participate	90

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

Table B.6 Weighted percentage of students, by student-reported parents' highest level of education, grades 8 and 12: 2002

	2002
Grade 8	
Less than high school	7
Graduated high school	17
Some education after high school	19
Graduated college	48
Unknown	9
Grade 12	
Less than high school	7
Graduated high school	18
Some education after high school	25
Graduated college	47
Unknown	3

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table B.7 Weighted percentage of students, by type of school, grades 4, 8, and 12: 1998 and 2002

	1998	2002
Grade 4		
Public	88	90
Nonpublic	12	10
Nonpublic: Catholic	7	5
Nonpublic: Other	4	4
Grade 8		
Public	89	91
Nonpublic	11	9
Nonpublic: Catholic	7	5
Nonpublic: Other	5	4
Grade 12		
Public	88	91
Nonpublic	12	9
Nonpublic: Catholic	8	5
Nonpublic: Other	3	5

NOTE: Percentages may not add to 100, or to the exact nonpublic percentages, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

Table B.8 Weighted percentage of students, by student-reported parents' highest level of education and type of school, grades 8 and 12: 2002

	Less than high school	Graduated high school	Some education after high school	Graduated college	Unknown
Grade 8					
Public	7	18	20	46	10
Nonpublic	2	9	15	69	5
Grade 12					
Public	7	19	25	45	3
Nonpublic	2	11	20	66	2

NOTE: Percentages may not add to 100, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table B.9 Weighted percentage of students, by type of location, grades 4, 8, and 12: 2002

	2002
Grade 4	
Central city	30
Urban fringe/large town	42
Rural/small town	28
Grade 8	
Central city	29
Urban fringe/large town	42
Rural/small town	29
Grade 12	
Central city	29
Urban fringe/large town	40
Rural/small town	31

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table B.10 Weighted percentage of students, by gender, grade 4: By state, 2002

Grade 4	Male	Female
Nation (Public)	51	49
Alabama	51	49
Arizona	51	49
Arkansas	49	51
California [1]	52	48
Connecticut	52	48
Delaware	50	50
Florida	51	49
Georgia	51	49
Hawaii	51	49
Idaho	53	47
Indiana	50	50
Iowa [1]	52	48
Kansas [1]	49	51
Kentucky	50	50
Louisiana	52	48
Maine	51	49
Maryland	48	52
Massachusetts	52	48
Michigan	51	49
Minnesota [1]	51	49
Mississippi	50	50
Missouri	50	50
Montana [1]	51	49
Nebraska	50	50
Nevada	49	51
New Mexico	53	47
New York [1]	51	49
North Carolina	50	50
North Dakota [1]	50	50
Ohio	50	50
Oklahoma	51	49
Oregon	50	50
Pennsylvania	51	49
Rhode Island	52	48
South Carolina	51	49
Tennessee [1]	50	50
Texas	51	49
Utah	52	48
Vermont	50	50
Virginia	50	50
Washington [1]	54	46
West Virginia	49	51
Wyoming	51	49
Other Jurisdictions		
District of Columbia	49	51
DDESS [1]	50	50
DoDDS [2]	50	50
Guam	52	48
Virgin Islands	49	51

[1] Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table B.11 Weighted percentage of students, by gender, grade 8: By state, 1998 and 2002

Grade 8	Male		Female	
	1998	2002	1998	2002
Nation (Public)	51	50	49	50
Alabama	49	50	51	50
Arizona	51	50	49	50
Arkansas	50	53	50	47
California !	48	52	52	48
Colorado	51	—	49	—
Connecticut	50	51	50	49
Delaware	51	51	49	49
Florida	49	50	51	50
Georgia	52	51	48	49
Hawaii	53	52	47	48
Idaho	—	52	—	48
Indiana	—	50	—	50
Kansas !	—	51	—	49
Kentucky	50	49	50	51
Louisiana	47	51	53	49
Maine	49	49	51	51
Maryland	50	48	50	52
Massachusetts	51	53	49	47
Michigan	—	52	—	48
Minnesota !	51	—	49	—
Mississippi	49	49	51	51
Missouri	51	50	49	50
Montana !	50	53	50	47
Nebraska	—	51	—	49
Nevada	50	52	50	48
New Mexico	52	51	48	49
New York !	51	52	49	48
North Carolina	51	50	49	50
North Dakota !	—	52	—	48
Ohio	—	50	—	50
Oklahoma	52	50	48	50
Oregon !	51	53	49	47
Pennsylvania	—	51	—	49
Rhode Island	51	52	49	48
South Carolina	51	50	49	50
Tennessee !	48	51	52	49
Texas	49	50	51	50
Utah	49	51	51	49
Vermont	—	52	—	48
Virginia	52	51	48	49
Washington !	49	52	51	48
West Virginia	52	51	48	49
Wisconsin !	51	—	49	—
Wyoming	52	51	48	49
Other Jurisdictions				
American Samoa	—	50	—	50
District of Columbia	48	49	52	51
DDESS [1]	51	47	49	53
DoDDS [2]	49	50	51	50
Guam	—	51	—	49
Virgin Islands	44	47	56	53

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
! Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table B.12 Weighted percentage of students, by race/ethnicity, grade 4: By state, 2002

Grade 4	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native	Other
Nation (Public)	60	18	17	4	1	1
Alabama	61	36	1	1	1	#
Arizona	50	5	35	2	7	#
Arkansas	69	25	5	1	#	#
California !	35	7	46	10	1	1
Connecticut	72	13	11	3	#	#
Delaware	58	33	6	2	#	#
Florida	51	24	22	2	#	1
Georgia	53	38	5	3	#	1
Hawaii	17	3	3	63	#	13
Idaho	85	1	11	1	2	#
Indiana	80	13	4	1	1	1
Iowa !	86	6	4	2	#	1
Kansas !	78	8	10	2	1	#
Kentucky	86	12	1	1	#	1
Louisiana	46	51	2	1	1	#
Maine	96	2	1	1	#	#
Maryland	52	37	5	4	1	#
Massachusetts	78	8	8	5	#	1
Michigan	72	20	4	2	2	1
Minnesota !	82	6	4	4	4	1
Mississippi	47	52	1	1	#	#
Missouri	79	17	2	1	#	#
Montana !	86	1	2	1	10	#
Nebraska	82	6	8	1	3	#
Nevada	53	11	28	6	2	#
New Mexico	35	2	47	2	13	1
New York !	54	19	21	6	#	1
North Carolina	58	31	6	2	2	2
North Dakota !	88	1	1	1	8	#
Ohio	76	20	2	1	#	1
Oklahoma	59	11	8	1	18	2
Oregon	78	3	11	5	1	2
Pennsylvania	77	17	4	2	#	#
Rhode Island	73	9	13	3	1	#
South Carolina	55	42	2	1	#	#
Tennessee !	73	23	2	1	#	#
Texas	36	18	41	3	1	#
Utah	85	1	8	3	1	#
Vermont	96	1	1	1	#	1
Virginia	64	25	5	4	1	1
Washington !	77	7	6	7	3	#
West Virginia	95	4	#	1	#	#
Wyoming	86	1	8	1	4	1
Other Jurisdictions						
District of Columbia	4	87	7	1	#	#
DDESS [1]	40	27	12	3	1	16
DoDDS [2]	47	15	7	7	1	22
Guam	1	#	#	98	#	#
Virgin Islands	1	86	12	#	#	1

Percentage rounds to zero.
! Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Percentages may not add to 100, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table B.13 Weighted percentage of students, by race/ethnicity, grade 8: By state, 1998 and 2002

Grade 8	White		Black		Hispanic		Asian/ Pacific Islander		American Indian/ Alaska Native		Other	
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
Nation (Public)	69	64	16	15	11	14	3	4	1	1	#	1
Alabama	67	62	31	36	1	1	1	1	#	#	#	#
Arizona	60	57	4	5	26	30	2	2	7	6	#	#
Arkansas	74	73	23	23	2	3	1	1	#	1	#	#
California !	42	37	8	7	39	42	10	13	1	1	1	1
Colorado	75	—	5	—	17	—	3	—	1	—	#	—
Connecticut	78	70	11	14	9	12	2	3	#	1	1	1
Delaware	67	64	27	29	4	5	2	2	#	#	#	#
Florida	56	55	28	23	14	18	2	2	#	#	#	1
Georgia	58	54	36	37	2	5	2	3	#	#	1	1
Hawaii	17	16	2	2	2	2	67	68	#	#	12	12
Idaho	—	88	—	1	—	9	—	1	—	1	—	#
Indiana	—	86	—	9	—	2	—	1	—	#	—	1
Kansas !	—	80	—	8	—	7	—	2	—	1	—	#
Kentucky	89	90	10	8	#	1	1	1	#	#	#	#
Louisiana	58	53	40	43	1	1	1	1	#	1	#	#
Maine	97	97	1	1	#	1	1	1	#	#	#	#
Maryland	59	55	34	34	3	5	4	5	#	#	#	#
Massachusetts	81	75	6	9	9	10	4	5	#	#	#	1
Michigan	—	77	—	18	—	2	—	2	—	#	—	#
Minnesota !	85	—	5	—	2	—	5	—	3	—	#	—
Mississippi	51	52	48	47	#	#	1	#	#	#	#	#
Missouri	84	81	14	16	1	1	1	1	#	#	#	#
Montana !	92	84	#	1	1	2	1	1	5	12	#	#
Nebraska	—	84	—	6	—	7	—	1	—	1	—	#
Nevada	65	60	9	10	19	22	5	7	2	1	#	#
New Mexico	40	36	3	2	46	47	1	1	9	13	1	#
New York !	60	55	19	21	15	17	5	6	#	#	1	#
North Carolina	64	63	28	30	2	4	2	2	3	#	#	1
North Dakota !	—	92	—	1	—	2	—	1	—	4	—	#
Ohio	—	80	—	15	—	2	—	1	—	#	—	2
Oklahoma	74	62	7	11	4	6	2	1	12	18	1	1
Oregon !	85	82	2	2	6	8	4	5	2	2	1	1
Pennsylvania	—	81	—	13	—	4	—	3	—	#	—	#
Rhode Island	81	75	7	9	8	13	3	2	#	#	1	#
South Carolina	58	56	40	42	1	1	1	1	#	#	#	#
Tennessee !	77	77	21	20	1	2	1	1	#	#	#	#
Texas	50	44	13	12	32	40	3	3	1	1	#	#
Utah	89	86	1	1	6	8	3	3	1	2	#	#
Vermont	—	96	—	1	—	#	—	1	—	1	—	#
Virginia	68	66	26	24	3	4	3	4	#	#	#	#
Washington !	81	79	4	4	7	7	6	8	2	2	#	#
West Virginia	95	95	4	4	#	#	#	#	#	#	#	#
Wisconsin !	84	—	8	—	4	—	3	—	1	—	#	—
Wyoming	90	88	1	2	5	7	1	1	2	3	#	#
Other Jurisdictions												
American Samoa	—	#	—	#	—	#	—	100	—	#	—	#
District of Columbia	4	3	89	87	5	8	1	2	#	#	#	#
DDESS [1]	42	38	27	23	22	20	2	6	1	1	7	13
DoDDS [2]	49	48	19	15	7	7	8	9	1	1	17	19
Guam	—	2	—	#	—	#	—	96	—	#	—	2
Virgin Islands	#	#	87	85	11	12	#	#	#	#	2	2

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.
Percentage rounds to zero.
! Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Percentages may not add to 100, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Table B.14 Weighted percentage of students, by eligibility for free/reduced-price school lunch, grade 4: By state, 2002

Grade 4	Eligible	Not eligible	Information not available
Nation (Public)	43	49	7
Alabama	53	34	13
Arizona	46	36	18
Arkansas	56	40	3
California !	46	37	17
Connecticut	27	66	6
Delaware	38	60	2
Florida	55	43	2
Georgia	47	50	3
Hawaii	47	52	1
Idaho	45	47	9
Indiana	33	60	7
Iowa !	30	70	#
Kansas !	43	56	#
Kentucky	48	50	2
Louisiana	61	31	8
Maine	31	63	6
Maryland	39	58	3
Massachusetts	27	67	6
Michigan	38	57	5
Minnesota !	29	58	14
Mississippi	65	25	10
Missouri	41	56	3
Montana !	38	57	5
Nebraska	40	56	4
Nevada	38	56	6
New Mexico	56	29	15
New York !	44	49	7
North Carolina	49	47	4
North Dakota !	31	66	2
Ohio	32	61	7
Oklahoma	55	42	3
Oregon	38	48	13
Pennsylvania	34	63	3
Rhode Island	33	54	13
South Carolina	54	40	5
Tennessee !	45	50	5
Texas	58	37	5
Utah	32	63	5
Vermont	27	69	5
Virginia	33	65	3
Washington !	32	59	9
West Virginia	52	45	3
Wyoming	41	56	4
Other Jurisdictions			
District of Columbia	78	21	1
DDESS [1]	32	35	33
DoDDS [2]	8	25	66
Guam	61	39	#
Virgin Islands	99	#	1

Percentage rounds to zero.
! Indicates that the jurisdiction did not meet one or more of the guidelines for school participation in 2002.
[1] Department of Defense Domestic Dependent Elementary and Secondary Schools.
[2] Department of Defense Dependents Schools (Overseas).
NOTE: Percentages may not add to 100, due to rounding.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2002 Writing Assessment.

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Table B.15 Weighted percentage of students, by eligibility for free/reduced-price school lunch, grade 8: By state, 1998 and 2002

Grade 8	Eligible		Not eligible		Information not available	
	1998	2002	1998	2002	1998	2002
Nation (Public)	30	34	58	56	12	10
Alabama	39	42	59	42	2	16
Arizona	33	34	52	53	15	14
Arkansas	35	44	60	54	5	2
California [1]	39	36	45	46	17	18
Colorado	24	—	65	—	11	—
Connecticut	18	30	68	62	13	8
Delaware	27	32	63	68	11	1
Florida	40	43	50	52	10	5
Georgia	35	40	53	55	12	5
Hawaii	37	40	59	59	4	1
Idaho	—	32	—	60	—	8
Indiana	—	25	—	69	—	6
Kansas !	—	30	—	67	—	3
Kentucky	39	40	57	57	4	3
Louisiana	48	50	43	36	9	14
Maine	26	24	66	69	7	7
Maryland	28	26	69	71	3	2
Massachusetts	23	29	73	69	5	2
Michigan	—	34	—	60	—	7
Minnesota !	23	—	70	—	7	—
Mississippi	51	58	42	36	7	6
Missouri	28	30	69	65	3	6
Montana !	24	31	67	67	9	2
Nebraska	—	35	—	63	—	2
Nevada	26	28	65	62	9	9
New Mexico	43	51	42	29	15	20
New York !	37	37	46	56	17	8
North Carolina	32	38	61	53	7	9
North Dakota !	—	25	—	74	—	2
Ohio	—	24	—	65	—	11
Oklahoma	34	45	57	50	9	5
Oregon !	26	26	69	63	5	11
Pennsylvania	—	30	—	69	—	#
Rhode Island	27	24	71	60	1	16
South Carolina	41	45	55	51	4	4
Tennessee !	33	38	65	52	2	10
Texas	38	45	59	48	3	7
Utah	22	24	67	66	11	9
Vermont	—	21	—	78	—	1
Virginia	23	26	70	70	7	3
Washington !	23	22	67	56	10	22
West Virginia	39	44	57	55	3	1
Wisconsin !	21	—	71	—	8	—
Wyoming	24	32	74	65	2	3
Other Jurisdictions						
American Samoa	—	100	—	#	—	#
District of Columbia	61	67	21	32	17	1
DDESS [2]	33	25	65	54	2	21
DoDDS [3]	5	6	22	23	73	71
Guam	—	30	—	69	—	1
Virgin Islands	80	99	#	#	20	1

— Indicates that the jurisdiction did not participate or did not meet minimum participation guidelines for reporting.

Percentage rounds to zero.

! Indicates that the jurisdiction or national aggregate did not meet one or more of the guidelines for school participation in 2002.

[1] Percentages by student's eligibility for free/reduced-price lunch in California do not include Los Angeles.

[2] Department of Defense Domestic Dependent Elementary and Secondary Schools.

[3] Department of Defense Dependents Schools (Overseas).

NOTE: Percentages may not add to 100, due to rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998 and 2002 Writing Assessments.

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Appendix C
State-Level Contextual Variables

To help place state results from the NAEP 2002 writing assessment into context, this appendix presents selected state-level data from the *Digest of Education Statistics 2001*.

Table C.1 Population and public-school enrollment, from non-NAEP sources: By state, April 2000 and fall 1999

	Estimated resident populations: April 1, 2000		Enrollment in public elementary and secondary schools: Fall 1999		
	Total (in thousands)	5- to 17-year-olds (in thousands)	Total	Kindergarten through grade 8[1]	Grades 9–12
Nation	281,422	53,118	46,857,321	33,488,158	13,369,163
Alabama	4,447	827	740,732	538,687	202,045
Alaska	627	143	134,391	95,601	38,790
Arizona	5,131	985	852,612	623,561	229,051
Arkansas	2,673	499	451,034	317,714	133,320
California	33,872	6,763	6,038,589	4,336,687	1,701,902
Colorado	4,301	803	708,109	506,568	201,541
Connecticut	3,406	618	553,993	403,913	150,080
Delaware	784	143	112,836	80,274	32,562
District of Columbia	572	82	77,194	59,917	17,277
Florida	15,982	2,701	2,381,396	1,725,493	655,903
Georgia	8,186	1,574	1,422,762	1,044,030	378,732
Hawaii	1,212	218	185,860	133,250	52,610
Idaho	1,294	271	245,331	168,822	76,509
Illinois	12,419	2,369	2,027,600	1,462,234	565,366
Indiana	6,080	1,151	988,702	699,221	289,481
Iowa	2,926	545	497,301	335,919	161,382
Kansas	2,688	524	472,188	325,818	146,370
Kentucky	4,042	729	648,180	458,607	189,573
Louisiana	4,469	902	756,579	548,019	208,560
Maine	1,275	231	209,253	148,774	60,479
Maryland	5,296	1,003	846,582	607,125	239,457
Massachusetts	6,349	1,103	971,425	706,251	265,174
Michigan	9,938	1,924	1,725,617	1,244,586	481,031
Minnesota	4,919	957	854,034	580,363	273,671
Mississippi	2,845	571	500,716	365,357	135,359
Missouri	5,595	1,058	914,110	648,758	265,352
Montana	902	175	157,556	107,490	50,066
Nebraska	1,711	333	288,261	197,014	91,247
Nevada	1,998	366	325,610	239,625	85,985
New Hampshire	1,236	234	206,783	146,854	59,929
New Jersey	8,414	1,524	1,289,256	953,766	335,490
New Mexico	1,819	378	324,495	228,592	95,903
New York	18,976	3,451	2,887,776	2,033,748	854,028
North Carolina	8,049	1,425	1,275,925	934,725	341,200
North Dakota	642	121	112,751	74,968	37,783
Ohio	11,353	2,133	1,836,554	1,296,450	540,104
Oklahoma	3,451	656	627,032	446,719	180,313
Oregon	3,421	624	545,033	378,474	166,559
Pennsylvania	12,281	2,194	1,816,716	1,262,181	554,535
Rhode Island	1,048	184	156,454	113,520	42,934
South Carolina	4,012	745	666,780	483,725	183,055
South Dakota	755	152	131,037	89,590	41,447
Tennessee	5,689	1,024	916,202	664,393	251,809
Texas	20,852	4,262	3,991,783	2,895,853	1,095,930
Utah	2,233	509	480,255	329,185	151,070
Vermont	609	114	104,559	72,276	32,283
Virginia	7,079	1,276	1,133,994	817,143	316,851
Washington	5,894	1,120	1,003,714	694,750	308,964
West Virginia	1,808	301	291,811	203,475	88,336
Wisconsin	5,364	1,026	877,753	596,439	281,314
Wyoming	494	98	92,105	61,654	30,451
American Samoa	—	—	15,477	11,899	3,578
Guam	—	—	32,951	24,151	8,800
Virgin Islands	—	—	20,866	14,821	6,045

— Data were not available.

[1] Includes a number of prekindergarten students.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-25, No. 1095 at the national level, SF1-P12 and unpublished data; and U.S. Department of Education, National Center for Education Statistics, Common Core of Data surveys.

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Table C.2 Poverty status of school-age children and children served under Individuals with Disabilities Education Act and Chapter 1, from non-NAEP sources: By state, 1998 and school years 1990–91 through 1999–2000

	Poverty status of 5- to 17-year-olds: 1998		Children (birth to age 21) served under IDEA[1] and Chapter 1 of the Education Consolidation and Improvement Act, State Operated Programs	
	Number in poverty (in thousands)	Percent in poverty	Number of children: 1999–2000 school year	Percent change: 1990–91 to 1999–2000
Nation	9,167	17.8	6,195,113	30.1
Alabama	156	21.8	99,763	5.1
Alaska	13	9.0	17,495	18.7
Arizona	222	23.6	93,336	63.1
Arkansas	57	13.1	60,864	27.2
California	1,459	22.3	640,815	36.6
Colorado	93	12.5	76,948	34.8
Connecticut	82	13.4	74,722	15.7
Delaware	24	15.7	16,287	13.9
District of Columbia	33	46.0	9,348	48.6
Florida	474	20.5	356,198	50.9
Georgia	377	24.7	164,374	61.2
Hawaii	32	14.5	22,964	74.4
Idaho	50	17.4	29,112	32.2
Illinois	308	12.1	291,221	21.8
Indiana	140	12.6	151,599	32.2
Iowa	73	14.2	71,970	18.6
Kansas	59	13.2	60,036	32.8
Kentucky	118	16.7	91,537	15.3
Louisiana	244	29.8	96,632	31.2
Maine	27	12.0	35,139	25.6
Maryland	66	8.1	111,711	22.4
Massachusetts	163	15.0	165,013	6.7
Michigan	311	14.8	213,404	27.8
Minnesota	130	12.6	107,942	33.4
Mississippi	108	19.3	62,359	2.3
Missouri	136	14.4	134,950	32.4
Montana	42	21.2	19,039	11.1
Nebraska	54	14.8	42,577	30.0
Nevada	49	12.8	35,703	93.6
New Hampshire	34	13.3	28,597	45.5
New Jersey	194	13.2	214,330	18.2
New Mexico	101	23.5	52,346	45.3
New York	848	28.9	434,347	41.3
North Carolina	277	21.3	173,067	40.6
North Dakota	28	17.2	13,612	8.9
Ohio	339	16.0	236,200	15.0
Oklahoma	120	19.9	83,149	26.6
Oregon	121	19.4	73,531	33.3
Pennsylvania	382	18.0	231,175	5.4
Rhode Island	36	20.5	29,895	41.8
South Carolina	129	17.6	103,153	32.6
South Dakota	13	9.2	16,246	8.4
Tennessee	156	14.5	126,732	20.8
Texas	809	20.1	493,850	40.8
Utah	55	11.8	55,389	16.0
Vermont	13	12.2	14,073	14.8
Virginia	92	7.9	161,298	41.5
Washington	118	10.8	116,235	36.1
West Virginia	65	25.7	50,314	16.6
Wisconsin	109	11.5	121,209	39.4
Wyoming	13	13.0	13,307	18.8
American Samoa	—	—	703	93.7
Guam	—	—	2,230	27.4
Virgin Islands	—	—	1,617	21.3

— Data were not available.

[1] Individuals with Disabilities Education Act.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Decennial Census, Minority Economic Profiles, unpublished data; *Current Population Reports*, Series P-60, "Poverty in the United States, Money Income of Households, Families, and Persons in the United States, and Income, Poverty, and Valuation of Noncash Benefits, various years, and Money Income in the U.S.: 1999", P60-201; U.S. Department of Education, Office of Special Education and Rehabilitative Services, *Annual Report to Congress on the Implementation of the Individuals with Disabilities Act*, various years.

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Table C.3 Expenditure per pupil, average teacher salary, and pupil/teacher ratio, in public schools, from non-NAEP sources: By state, school years 1998–99 and 2000–01, and fall 1999

	In public elementary and secondary schools		
	Expenditure per pupil: 1998–99	Estimated average annual salary of teachers: 2000–01	Pupil/teacher ratio: Fall 1999
Nation	$6,508	$42,898	16 [1]
Alabama	5,188	37,956	15 [1]
Alaska	8,404	46,986	17
Arizona	4,672	36,302	19
Arkansas	4,956	34,476	14
California	5,801	48,923	21 [1]
Colorado	5,923	39,284	17
Connecticut	9,318	52,100	14
Delaware	7,706	47,047	15
District of Columbia	9,650	48,651	16 [1]
Florida	5,790	37,824	18
Georgia	6,092	42,216	16
Hawaii	6,081	41,980	17
Idaho	5,066	36,375	18
Illinois	6,762	48,053	16
Indiana	6,772	43,055	17
Iowa	6,243	36,479	15
Kansas	6,015	39,432	14
Kentucky	5,560	37,234	15
Louisiana	5,548	34,253	17
Maine	7,155	36,256	13
Maryland	7,326	44,997	17
Massachusetts	8,260	47,522	13
Michigan	7,432	49,975	18
Minnesota	6,791	40,577	15
Mississippi	4,565	32,957	16
Missouri	5,855	36,764	14
Montana	5,974	32,930	15
Nebraska	6,256	34,175	14
Nevada	5,587	40,172	19
New Hampshire	6,433	38,303	15
New Jersey	10,145	53,281	13
New Mexico	5,440	33,785	16
New York	9,344	50,920	14
North Carolina	5,656	41,167	16
North Dakota	5,442	30,891	14
Ohio	6,627	42,716	16
Oklahoma	5,303	34,434	15
Oregon	6,828	42,333	20
Pennsylvania	7,450	49,500	16
Rhode Island	8,294	48,474	14
South Carolina	5,656	37,327	15
South Dakota	5,259	30,265	14
Tennessee	5,123	37,074	15 [1]
Texas	5,685	38,614	15
Utah	4,210	36,049	22
Vermont	7,541	38,651	12
Virginia	6,350	40,197	14 [1]
Washington	6,110	42,101	20
West Virginia	6,677	35,764	14
Wisconsin	7,527	41,646	14
Wyoming	6,842	34,189	13
American Samoa	2,283	—	19
Guam	—	—	18
Virgin Islands	6,983	—	14

— Data were not available.
[1] Includes imputations for underreporting.
SOURCE: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, Revenues and Expenditures for Public Elementary and Secondary Schools; Statistics of State School Systems; and Common Core of Data Surveys; National Education Association, Estimates of School Statistics and unpublished data, 2001.

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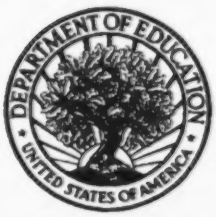

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